LOUISVILLE - JEFFERSON COUNTY METRO GOVERNMENT
AIR POLLUTION CONTROL DISTRICT

TITLE V OPERATING PERMIT

Permit No.: 120-97-TV (R1) Plant ID: 0185

Effective Date: 5 October 2000 Expiration Date: 5 October 2005

UTM Northing: 4226.3 UTM Easting: 609.3

SIC: 2821/2851 NAICS: 325211/32551 AFS: 00185

Permission is hereby given by the Louisville - Jefferson County Metro Government Air Pollution Control District to operate equipment located at:

AKZO Nobel Resins
4730 Crittenden Drive
Louisville, Kentucky 40233

The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. This permit and the authorization to operate the emission units listed shall expire on midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Applicant for Permit: AKZO Nobel Resins

Responsible Official: Michael J. Kelly

Title of Responsible Official: General Manager

Date Application Received: 22 April 1997; Revised Initial 25 April 2000

Date Application Administratively Complete: 12 May 1997

Date Public Notice Given: 6 June 2000

Reviewing Engineer (37) Air Pollution Control Officer

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Title V Permit Revisions/Changes

Revision No.	Date of Reissuance	Public Notice Date	Type	Emission Unit/Page No.	Description
Initial	10/5/2000	6/25/2000	Initial	Entire Permit	Entire Permit
Rev 1	1/30/2004	NA	Administrative	Cover page, U3, U4, U7, U9, U12, and U18	Incorporating Construction permits 85-01, 125-02, and 126-02. Adding 40 CFR 63 Subpart OOO conditions, deleting unit U12 (Solvent recovery), and changing responsible official

Abbreviations and Acronyms

AC	-	Additional Condition
AFS	-	AIRS Facility Subsystem
AIRS	-	Aerometric Information Retrieval System
APCD	-	Air Pollution Control District
ASL	-	Adjusted Significant Level
atm	-	Atmosphere
BACT	-	Best Available Control Technology
Btu	-	British Thermal Unit
°C	-	Degrees Centigrade
CEMS	-	Continuous Emission Monitoring System
CAAA	-	Clean Air Act Amendments (15 November 1990)
cf	-	Cubic foot
DOE	-	District Only Enforceable
°F	-	Degrees Fahrenheit
gal	-	Gallon
HAP	-	Hazardous Air Pollutant
Hg	-	Mercury
hr	-	hour
lbs	-	Pounds
l	-	Liter
MACT	-	Maximum Achievable Control Technology
m	-	Meter
mg	-	Milligram
mm	-	Millimeter
MM	-	Million
MOCS	-	Management of Change System
NAICS	-	North American Industry Classification System
NSR	-	New Source Review
NO_x	-	Nitrogen oxides
NSPS	-	New Source Performance Standards
PM	-	Particulate Matter
PM_{10}	-	Particulate matter less than 10 microns
ppm	-	Parts per million
PSD	-	Prevention of Significant Deterioration
PMP	-	Preventive Maintenance Plan
psia	-	Pounds per square inch absolute
RACT	-	Reasonably Available Control Technology
SIC	-	Standard Industrial Classification
SIP	-	State Implementation Plan
SO_2	-	Sulfur dioxide
TAL	-	Threshold Ambient Limit
TAP	-	Toxic Air Pollutant
tpy	-	Tons per year
UTM	-	Universal Transverse Mercator
VOC	-	Volatile Organic Compound

Preamble

Title V of the Clean Air Act Amendments of 1990 required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Air Pollution Control District (APCDJC) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations".

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit general conditions define requirements which are generally applicable to all Title V companies under the jurisdiction of APCDJC. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the general conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The general conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The source's Title V permit may include a list of "insignificant activities," as defined in District Regulation 2.16, section 1.22 which was current as of the date the permit was proposed for review by USEPA, Region 4. Activities so identified may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply. No periodic monitoring shall be required for facilities designated as insignificant activities.

General Conditions

1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan. (Regulation 2.16, sections 4.1.3, 4.1.13.1 and 4.1.13.7)

2. **Compliance Certification** - The owner or operator shall certify, annually or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification directly to the following address as well as to the District, as set forth in Regulation 2.16, section 4.3.5.4:

   US EPA - Region IV
   Air Enforcement Branch
   Atlanta Federal Center
   61 Forsyth Street
   Atlanta, GA 30303-8960

3. **Compliance Schedule** - A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16 section 4.3.4. The progress reports shall contain:

   a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.

   b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, it shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

5. **Emergency Provision**

a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An emergency occurred and that the owner or operator can identify the cause of the emergency.

ii. The permitted facility was at the time being properly operated.

iii. During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

iv. The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.

b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

c. This condition is in addition to any emergency or upset provision contained in an applicable requirement.

(Regulation 2.16, sections 4.7.1 through 4.7.4)

6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. (Regulation 2.08, section 1.3)

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.

8. **Enforceability Requirements** - Except for the conditions that are specifically designated as "District Only Enforceable Conditions", all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. (Regulation 2.16, sections 4.2.1 and 4.2.2)

9. **Enforcement Action Defense**

a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation.

(Regulation 2.16, sections 4.1.13.2 and 4.1.13.3)

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit. (Regulation 2.16, section 4.1.13.6) If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA. (Regulation 2.07, section 10.2)

12. **Insignificant Activities -** The owner or operator shall notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. (Regulation 2.16, section 5)

13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours:

a. Enter the premises to inspect any emissions-related activity or records required in this permit.

b. Have access to and copy records required by this permit.

c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.

d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements.
(Regulation 2.16, section 4.3.2)

14. **Monitoring and Related Record Keeping and Reporting Requirements** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting

period shall be January 1st through June 30th and July 1st through December 31st of each calendar year. All reports shall be postmarked by the 60th day following the end of each reporting period. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes.

15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5. (Regulation 2.16, section 4.1.5)

16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.

17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, sections 2.3 and 5.4.

18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.

19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.

20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.

21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. (Regulation 2.16, section 4.1.16)

22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.

23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.

24. **Permit Revocation and Termination by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1.1 through 5.11.1.5. For

purposes of Section 5, substantial or unresolved noncompliance includes, but is not limited to:

a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment.

b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District.

c. Knowingly making any false statement in any permit application.

d. Noncompliance with Regulation 1.07, section 4.2; or

e. Noncompliance with KRS Chapter 77.

25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.

26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.

27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.

28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.

29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.

30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16 section 5.10.

31. **Risk Management Plan (112(r))** - For each process subject to Section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.

32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected. (Regulation 2.16, section 4.1.12)

33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.

34. **Startups, Shutdowns, and Malfunctions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.

35. **Submittal of Reports, Data, Notifications, and Applications**

a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16 sections 3.1, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.11.7 shall be submitted to:

Air Pollution Control District of Jefferson County
850 Barret Ave
Louisville, KY 40204-1745

b. Documents which are specifically required to be submitted to EPA as set forth in Regulation 2.16 sections 3.3, and 5.8.5 shall be mailed to EPA at the following address:

US EPA - Region IV
APTMD - 12th floor
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-3104

36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following regulations:

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	**Title**
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emission Standards and Maintenance Requirements
1.06	Source Self-Monitoring and Reporting
1.07	Emissions During Startups, Shutdowns, Malfunctions, and Emergencies
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application
2.02	Air Pollution Regulation Requirements and Exemptions

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	**Title**
2.03	Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.01	General Provisions (for Hazardous Air Pollutants)
5.03	Potential Hazardous Emissions
6.01	General Provisions (for *Existing Affected Facilities*)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (for *New Affected Facilities*)

DISTRICT ONLY ENFORCEABLE REGULATIONS	
Regulation	**Title**
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Emissions Fees, Permit Fees, Permit Renewal Procedures, and Additional Program Fees
8.03	Commuter Vehicle Testing Requirements

37. **Stratospheric Ozone Protection Requirements** - Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts A, B, and F. Those requirements include the following restrictions:

    a. Any facility having any refrigeration equipment normally containing fifty (50) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added according to 40 CFR 82.166;

b. No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided in 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved according to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;

c. No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or II substance in 40 CFR 82, Subpart A, Appendices A and B, except in compliance with 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166.

d. No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined in 40 CFR 82.152) for service, maintenance, or repair unless the person has been properly trained and certified according to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance according to 40 CFR 82.158 and unless the person observes the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

e. No person may dispose of appliances (except small appliances, as defined in 40 CFR 82.152) without using equipment certified for that type of appliance according to 40 CFR 82.158 and without observing the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

f. No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82 Subpart F;

g. If the permittee manufactures, transforms, imports, or exports, a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), the permittee is subject to all requirements as specified in 40CFR82 Subpart A, Production and Consumption Controls.

(Regulation 2.16, section 4.1.5)

Emission Unit U1 Description: One (1) latex emulsion resin production facility

U1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.09	Standards of Performance for Existing Process Operations	1, 2, 3 and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.18	Rule Effectiveness	1 through 3
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U1 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard	
VOC	Class I Solvent	3 lbs/hr and 15 lbs/day
	Class II Solvent	8 lbs/hr and 40 lbs/day
	Class III Solvent	450 lbs/hr and 3000 lbs/day
PM	2.58 lbs/hr	
	< 20% Opacity	

The following TAP emission limits are District Only Enforceable pursuant to Regulation 5.11.

Regulated Air Pollutant	Limit/Standard	Regulated Air Pollutant	Limit/Standard
Acrylic acid*	11.57 lbs/hr	Phosphoric acid*	0.38 lbs/hr
Ammonia*	6.95 lbs/hr	Misc TAPS	See AC # 1. c.

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U1 Components:

Emission Point	Description	Control ID
E1	One (1) 1,540 gallon pre-emulsion mix tank	Uncontrolled
E2, E3, E4	Three (3) weigh tanks E2 - 1,000 gallons; E3 & E4 - 50 gallons each	
E5	One (1) 1,000 gallon reactor designated as K4 with reflux condenser	C1/C2

U1 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C1	S-17	Shell-and-Tube Condenser	Outlet gas stream temp	< 130°F	Record keeping Daily	Semi-annual
C2	S-13	Venturi Scrubber	Pressure drop	3-6" H_2O	Record keeping Daily	Semi-annual

U1 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. PM (Regulation 6.09, Section 3)

      i. Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.3)

      ii. Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit as determined using Table 1 in Regulation 6.09. (section 3.4)

   b. VOC (Regulation 6.24, Section 3)

      i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.1)

      ii. Class II Solvents - No owner or operator shall discharge into the atmosphere more than 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.2)

      iii. Class III Solvents - No owner or operator shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.3)

   c. TAPs (Regulation 5.11)

      i. For those TAPs not specifically listed under the "Allowable Emissions" section on page 14 of this permit, the owner or operator shall not allow or cause the emissions of TAPs from Emission Units U1, U2, U3 and U4 combined to exceed the ASL value, unless modeling or a RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of any TAP subject to Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the

net increase (the result of the algebraic sum of increases and decreases) in emission rate of any TAP will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall limit the hourly charging rate for trimelletic anhydride to no more than 852 lbs/hr averaged over an 8 hour period.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. PM

i. The owner or operator shall monitor and record the pressure drop across the venturi scrubber (C2) once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.a.

b. Opacity

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest, i.e., solid material is being introduced into the process) and daylight hours. No more than four Emission Points shall be observed simultaneously.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Any Method 9 tests performed shall meet the requirements of 40 CFR Part 60, Appendix A. Subsequent visible emission surveys shall be conducted as specified in AC # 2.b.i.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

c. VOC

i. The owner or operator shall monitor and record the outlet gas stream temperature from condenser C1 once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.c.

d. TAPs

Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.d.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall maintain records that demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

a. Reactor Purge Emissions

$$\text{Purge emissions} = (R_{Vol})(C^i - C^f)$$

where:
R_{Vol} = Reactor volume
Cf = final VOC concentration in reactor
Ci = initial VOC concentration in reactor

b. VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where:
E_r = Emission Rate
Pt = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
$V = D_r/7.48$ gal per cu ft
$y_i = (x_i)(P)/P_t$
where: $x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

c. VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$$E_B = (B_t)(C_R)$$

where:
E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. PM

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The batch formulation including the name and weight % of each solid;
iii. The number of operating hours for each operating day;
iv. The hourly PM emissions;
v. Identification of all periods when control device C2 was not operating or bypassing occurred; and
vi. The results of the pressure drop readings required by AC # 2.a.i.

b. Opacity

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from 2.b.iii. above shall be documented and records made available to the District upon request.

c. VOC

The owner or operator shall maintain daily records of the following information:

i. The total number of gallons of each batch manufactured for each operating day;
ii. The batch formulation including the name and weight % of each VOC;
iii. The number of operating hours for each operating day;
iv. The hourly and daily VOC emissions as determined using the calculation methodology specified in AC # 3;
v. The identification of all periods when control device C1 was not operating or bypassing occurred; and
vi. The results of the temperature readings required by AC # 2. c. i.

d. TAPS

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.11.

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight % of each TAP.

ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.

iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight % of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration, then no further evaluation is required. If the weight % of a TAP in the new batch formulation exceeds the raw material usage rate used in the initial compliance demonstration, the owner or operator shall determine the emission rate of the TAP and demonstrate compliance with applicable emission standard.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. PM

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.09:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device; malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for opacity:

i. Emission Unit ID number and Stack ID number;
ii. The beginning and ending date of the reporting period;
iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration;
iv. The date, time and results of each Method 9 conducted. If no Method 9 tests were performed during the reporting period, the owner or operator may submit a negative declaration; and
v. Description of any corrective action taken pursuant to AC # 2.b.iii.

c. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.24:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly and daily VOC emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

d. TAPs

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 5.11:

i. Emission Unit/Point ID number;
ii. The beginning and ending date of the reporting period;
iii. Summary report for any TAP compliance evaluations required by AC # 4.d.iii. The summary report shall include the name of each TAP evaluated, emission calculations, and results of the compliance analysis. If no TAP evaluations were performed during the reporting period, the owner or operator may submit a negative declaration.

e. Control Devices C1 and C2

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control devices C1 and C2:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions. (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Emission Unit U2 Description: One (1) resin production facility for synthetic resins including Acrylic, Alkyd, Polyester, and Copolymer.

U2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.09	Standards of Performance for Existing Process Operations	1, 2, 3 and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U2 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard	
VOC	Class I Solvent	3 lbs/hr and 15 lbs/day
	Class II Solvent	8 lbs/hr and 40 lbs/day
	Class III Solvent	450 lbs/hr and 3000 lbs/day
PM	2.58 lbs/hr	
Opacity	< 20%	

The following TAP emission limits are District Only Enforceable pursuant to Regulation 5.11.

Regulated Air Pollutant	Limit/Standard	Regulated Air Pollutant	Limit/Standard
Acrylic acid*	11.57 lbs/hr	Phosphoric acid*	0.38 lbs/hr

Ammonia*	6.95 lbs/hr	Misc TAPs	See AC # 1. c.

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U2 Components:

Emission Point	Description	Control ID
E6, E7	Two (2) 1,540 gallon weigh tanks	Uncontrolled
E8	One (1) Catalyst tank	
E9	One (1) 3,000 gallon reactor designated as K5 with reflux condenser	C4
E10	One (1) Catch tank	Uncontrolled

U2 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C4	S-18	Venturi Scrubber	Pressure drop	3-6" H_2O	Record keeping Daily	Semi-annual

U2 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. PM (Regulation 6.09, Section 3)

      i. Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.3)

      ii. Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit as determined using Table 1 in Regulation 6.09. (section 3.4)

   b. VOC (Regulation 6.24, Section 3)

      i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.1)

      ii. Class II Solvents - No owner or operator shall discharge into the atmosphere more than 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.2)

      iii. Class III Solvents - No owner or operator shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.3)

   c. TAPs (Regulation 5.11)

      i. For those TAPs not specifically listed under the "Allowable Emissions" section on page 22 of this permit, the owner or operator shall not allow or cause the emissions of TAP's from Emission Units U1, U2, U3 and U4 combined to exceed the ASL value, unless modeling or a RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of any TAP subject to Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the

net increase (the result of the algebraic sum of increases and decreases) in emission rate of any TAP will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall limit the hourly charging rate for trimelletic anhydride to no more than 852 lbs/hr averaged over an 8 hour period.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. PM

i. The owner or operator shall monitor and record the pressure drop across the venturi scrubber (C4) once each operating day.

ii. See AC # 4.a. for record keeping requirements to monitor ongoing compliance with the PM emission standard.

b. Opacity

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest ie, solid material is being introduced into the process) and daylight hours. No more than four Emission Points shall be observed simultaneously.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Any Method 9 tests performed shall meet the requirements of 40 CFR Part 60, Appendix A. Subsequent visible emission surveys shall be conducted as specified in AC# 2.b.i.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

c. VOC (Regulation 2.16, section 4.1.9.1.2)

See AC # 4.c. for record keeping requirements to monitor ongoing compliance with the VOC emission standards.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall demonstrate compliance with the VOC emission standards using the following calculation methodology:

a. Reactor Purge Emissions

$$\text{Purge emissions} = (R_{Vol})(C^i - C^f)$$

where:
R_{Vol} = Reactor volume
C^f = final VOC concentration in reactor
C^i = initial VOC concentration in reactor

b. VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where:
E_r = Emission Rate
P_t = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
$V = D_r/7.48$ gal per cu ft
$y_i = (x_i)(P)/P_t$

where:
$x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

c. VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$$E_B = (B_t)(C_R)$$

where:
E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. PM

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The formulation including the name and weight % of each solid;
iii. The number of operating hours for each operating day;
iv. The hourly PM emissions;
v. The identification of all periods when control device C2 was not operating or bypassing occurred; and
vi. The results of the pressure drop readings required by AC # 2.a.i.

b. Opacity

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from 2. b. iii. above shall be documented and records made available to the District upon request.

c. VOC

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The batch formulation including the name and weight % of each VOC;
iii. The number of operating hours for each operating day; and
iv. The hourly and daily VOC emissions as determined using the calculation methodology specified in AC # 3.

d. TAPs

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.11.

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight percent of each TAP.
ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.
iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight percent of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration,

then no further evaluation is required. If the weight percent of a TAP in the new batch formulation exceeds the raw material usage rate used in the initial compliance demonstration, the owner or operator shall determine the emission rate of the TAP and demonstrate compliance with applicable emission standard.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. PM

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.09:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for opacity:

i. Emission Unit ID number and Stack ID number;
ii. The beginning and ending date of the reporting period;
iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration;
iv. The date, time and results of each Method 9 conducted. If no Method 9 tests were performed during the reporting period, the owner or operator may submit a negative declaration; and
v. Description of any corrective action taken pursuant to AC # 2.b.iii.

c. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.24:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly and daily VOC emission limits including the quantity of excess emissions;

iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

d. TAPs

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 5.11:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. Summary report for any TAP compliance evaluations required by AC # 4.d.i. The summary report shall include the name of each TAP evaluated, emission calculations, and results of the compliance analysis. If no TAP evaluations were performed during the reporting period, the owner or operator may submit a negative declaration.

e. Control Device C4

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control device C4:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Emission Unit U3 Description: One resin production facility for amino resins.

U3 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.09	Standards of Performance for Existing Process Operations	1, 2, 3 and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2
40 CFR 63 Subpart A	General Provisions	63.1 through 63.15
40 CFR 63 Subpart OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	63.1400, 63.1401, 63.1402, 63.1403, 63.1406, 63.1410, 63.1413, 63.1414, 63.1415, 63.1416, 63.1417

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	1, 3.1, 3.54, 4, 5
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U3 Allowable Emissions:

Regulated Air Pollutant	**Limit/Standard**	
VOC	Class I Solvent	3 lbs/hr and 15 lbs/day
	Class II Solvent	8 lbs/hr and 40 lbs/day
	Class III Solvent	450 lbs/hr and 3000 lbs/day
PM	2.58 lbs/hr	
HAPs	0.0567 lb/1000 lb solvent-based product (See AC 1.a.)	

The following TAP emission limits are District Only Enforceable pursuant to Regulation 5.11.

Regulated Air Pollutant	Limit/Standard	Regulated Air Pollutant	Limit/Standard
Acrylic acid*	11.57 lbs/hr	Phosphoric acid*	0.38 lbs/hr
Ammonia*	6.95 lbs/hr	Misc TAPs	See AC # 1.e.i.

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U3 Components:

Emission Pt	Description	Applicable Regulation	Control ID
E12	One (1) 1,540 gallon weigh tank	6.24	Uncontrolled
		40 CFR 63 Subpart OOO	
E13-14	Two (2) Solvent tanks	6.24	
		40 CFR 63 Subpart OOO	
E15	One (1) 5,000 gallon reactor designated as K6 with reflux condenser	6.09	C12
		6.24	
		40 CFR 63 Subpart OOO	
E210	One (1) 500 gallon alcohol recycle weigh tank	6.24	Uncontrolled
		40 CFR 63 Subpart OOO	

U3 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C12	S-20/33	Venturi Scrubber	Pressure drop	3-6" H_2O	Record keeping Daily	Semi-annual

Control Devices: Emission Unit U3 utilizes a reflux condenser which is considered a recovery device as defined in 40 CFR Part 63, Subpart OOO, section 63.1402.

U3 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. **HAP** (40 CFR 63 Subpart OOO)

      The owner or operator shall comply with the standards as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

   b. **PM** (Regulation 6.09, Section 3)

      Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit. (section 3.4)

   c. **Opacity** (regulation 6.09, section 3)

      Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.3)

   d. **VOC** (Regulation 6.24, Section 3)

      i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.1)

      ii. Class II Solvents - No owner or operator shall discharge into the atmosphere more than 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.2)

      iii. Class III Solvents - No owner or operator shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.3)

   e. **TAPs**

      i. For all Toxic Air Pollutants (TAPs) that are not regulated by 40 CFR 63 Subpart OOO: For those TAPs not specifically listed in the "Allowable

Emissions" section on page 30 of this permit, the owner or operator shall not allow or cause the emissions of TAPs from Emission Units U1, U2, U3 and U4 combined to exceed the ASL value, unless modeling or a RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of any TAP subject to Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the net increase (the result of the algebraic sum of increases and decreases) in emission rate of any TAP will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall limit the hourly charging rate for trimelletic anhydride to no more than 852 lbs/hr averaged over an 8 hour period.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the monitoring as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **PM**

i. The owner or operator shall monitor and record the pressure drop across the venturi scrubber (C12) once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 5.b.

c. **Opacity**

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest ie, solid material is being introduced into the process) and daylight hours.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall

perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Subsequent visible emission surveys shall be conducted as specified in AC# 2.c.i. above.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

d. **VOC**

Compliance monitoring shall consist of the record keeping requirement specified in AC # 5.d.

e. **TAPs**

Compliance monitoring shall consist of the record keeping requirement specified in AC# 5.e.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall demonstrate compliance with the VOC emission standards using the following calculation methodology:

a. Reactor Purge Emissions

$$\text{Purge emissions} = (R_{Vol})(C^i - C^f)$$

where:
R_{Vol} = Reactor volume
C^f = final VOC concentration in reactor
C^i = initial VOC concentration in reactor

b. VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where:
E_r = Emission Rate
P_t = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
V = D_r/7.48 gal per cu ft

$y_i = (x_i)(P)/P_t$

where:
$x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

c. VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$E_B = (B_t)(C_R)$

where:
E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the recordkeeping as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **PM**

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The formulation including the name and weight % of each solid;
iii. The number of operating hours for each operating day;
iv. The hourly PM emissions;
v. The identification of all periods when control device C12 was not operating or bypassing occurred; and
vi. The results of the pressure drop readings required by AC # 2.b.i.

c. **Opacity**

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from 2.c.iii. above shall be documented and records made available to the District upon request.

d. **VOC**

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The formulation including the name and weight % of each VOC;
iii. The number of operating hours for each operating day; and
iv. The hourly and daily VOC emissions as determined using the calculation methodology specified in AC # 3.

e. **TAPs**

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.11.

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight percent of each TAP.
ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.
iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight percent of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration, then no further evaluation is required. If the weight percent of a TAP in the new batch formulation exceeds the raw material usage rate used in the initial compliance demonstration, the owner or operator shall determine the emission rate of the TAP and demonstrate compliance with applicable emission standard.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the reporting as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **PM**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for PM:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;

iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

c. **Opacity**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Opacity:

i. Emission Unit ID number and Stack ID number;
ii. The beginning and ending date of the reporting period;
iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration;
iv. The date, time and results of each Method 9 conducted. If no Method 9 tests were conducted during the reporting period, the owner or operator may submit a negative declaration; and
v. Description of any corrective action taken pursuant to AC# 2.d.iii.

d. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for VOC:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly and daily VOC emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

e. Control Device C12

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control device C12:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29
2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14

Emission Unit U4 Description: One (1) resin production facility for synthetic resins including Acrylic, Alkyd, Polyester, and Copolymer.

U4 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.09	Standards of Performance for Existing Process Operations	1, 2, 3 and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2
40 CFR 63 Subpart A	General Provisions	63.1 through 63.15
40 CFR 63 Subpart OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	63.1400, 63.1401, 63.1402, 63.1403, 63.1406, 63.1410, 63.1413, 63.1414, 63.1415, 63.1416, 63.1417

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	1, 3.1, 3.54, 4, 5
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U4 Allowable Emissions:

Regulated Air Pollutant	**Limit/Standard**	
VOC	Class I Solvent	3 lbs/hr and 15 lbs/day
	Class II Solvent	8 lbs/hr and 40 lbs/day
	Class III Solvent	450 lbs/hr and 3000 lbs/day
PM	2.58 lbs/hr	
Opacity	< 20%	

The following TAP emission limits are District Only Enforceable pursuant to Regulation 5.11.

Regulated Air Pollutant	Limit/Standard	Regulated Air Pollutant	Limit/Standard
Acrylic acid*	11.57 lbs/hr	Phosphoric acid*	0.38 lbs/hr
Ammonia*	6.95 lbs/hr	Misc TAPs	See AC # 1.e.i.

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U4 Components:

Emission Pt	Description	Applicable Regulation	Control ID
E16	One (1) Catalyst tank	5.11	Uncontrolled
		6.24	
E17	One (1) 1,540 gallon weigh tank	5.11	
		6.24	
		40 CFR 63 Subpart OOO	
E18	One (1) 5,500 gallon reactor designated as K8 with reflux condenser	5.11	C12
		6.09	
		6.24	
		40 CFR 63 Subpart OOO	
E19	One (1) Catch tank	5.11	Uncontrolled
		6.24	
		40 CFR 63 Subpart OOO	

U4 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C12	S-26/33	Venturi Scrubber	Pressure drop	3-6" H_2O	Record keeping Daily	Semi-annual

U4 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. **HAP** (40 CFR 63 Subpart OOO)

      The owner or operator shall comply with the standards as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

   b. **PM** (Regulation 6.09, Section 3)

      Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit. (section 3.4)

   c. **Opacity** (regulation 6.09, section 3)

      Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.3)

   d. **VOC** (Regulation 6.24, Section 3)

      i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.1)

      ii. Class II Solvents - No owner or operator shall discharge into the atmosphere more than 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.2)

      iii. Class III Solvents - No owner or operator shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.3)

   e. **TAPs** (Regulation 5.11)

      i. For all Toxic Air Pollutants (TAPs) that are not regulated by 40 CFR 63 Subpart OOO: For those TAPs not specifically listed in the "Allowable

Emissions" section on page 38 of this permit, the owner or operator shall not allow or cause the emissions of TAP's from Emission Units U1, U2, U3 and U4 combined to exceed the ASL value, unless modeling or a RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of any TAP subject to Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the net increase (the result of the algebraic sum of increases and decreases) in emission rate of any TAP will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall limit the hourly charging rate for trimelletic anhydride to no more than 852 lbs/hr averaged over an 8 hour period.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the monitoring as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **PM**

i. The owner or operator shall monitor and record the pressure drop across the venturi scrubber (C12) once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.b.

c. **Opacity**

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest ie, solid material is being introduced into the process) and daylight hours.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall

perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Subsequent visible emission surveys shall be conducted as specified in AC# 2.c.i. above.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

d. **VOC**

Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.d.

e. **TAPs**

See AC # 4.e. for record keeping requirements to monitor ongoing compliance with the TAP emission standards.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall maintain records that demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

a. Reactor Purge Emissions

$$\text{Purge emissions} = (R_{Vol})(C^i - C^f)$$

where:
R_{Vol} = Reactor volume
C^f = final VOC concentration in reactor
C^i = initial VOC concentration in reactor

b. VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where:
E_r = Emission Rate
P_t = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
V = D_r/7.48 gal per cu ft

$y_i = (x_i)(P)/P_t$

where:
$x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

c. VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$E_B = (B_t)(C_R)$

where:
E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the recordkeeping as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **PM**

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The formulation including the name and weight % of each solid;
iii. The number of operating hours for each operating day;
iv. The hourly PM emissions;
v. The identification of all periods when control device C12 was not operating or bypassing occurred; and
vi. The results of the pressure drop readings required by AC # 2.a.i.

c. **Opacity**

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from 2.c.iii. above shall be documented and records made available to the District upon request.

d. **VOC**

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The batch formulation including the name and weight percent of each VOC;
iii. The number of operating hours for each operating day; and
iv. The hourly and daily VOC emissions as determined using the calculation methodology specified in AC # 3.

e. **TAPs**

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.11.

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight percent of each TAP.
ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.
iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight percent of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration, then no further evaluation is required. If the weight % of a TAP in the new batch formulation exceeds the raw material usage rate specified in the initial compliance demonstration, the owner or operator shall determine the emission rate of the TAP and demonstrate compliance with applicable emission standard.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the reporting as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **PM**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.09:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;

iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

c. **Opacity**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Opacity:

i. Emission Unit ID number and Stack ID number;
ii. The beginning and ending date of the reporting period;
iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration;
iv. The date, time and results of each Method 9 conducted. If no Method 9 tests were conducted during the reporting period, the owner or operator may submit a negative declaration; and
v. Description of any corrective action taken pursuant to AC# 2.c.iii.

d. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.24:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly and daily VOC emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

e. **TAPs**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 5.11:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. Summary report for any TAP compliance evaluations required by AC # 4.e.iii. The summary report shall include the name of each TAP evaluated, emission calculations, and results of the compliance analysis. If no TAP evaluations were performed during the reporting period, the owner or operator may submit a negative declaration.

f. Control Device C12

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control device C12:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29
2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14

Emission Unit U5 Description: One (1) resin production facility for synthetic resins including Acrylic, Alkyd, Polyester, and Copolymer.

U5 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
7.08	Standards of Performance for New Process Operations	1, 2, 3 and 5
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.18	Rule Effectiveness	1 through 3
5.12	Standards of Performance for New or Modified Sources Emitting Toxic Air Pollutants	1 through 5
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U5 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
VOC	See AC # 1.b.
PM	4.12 lbs/hr
Opacity	< 20 %

The following TAP emission limits are District Only Enforceable pursuant to Regulation 5.12.

Regulated Air Pollutant	Limit/Standard	Regulated Air Pollutant	Limit/Standard
Acrylamide*	0.08 lbs/hr	Phthalic anhydride*	1.57 lbs/hr
Ethyl acrylate*	8.68 lbs/hr	Trimellitic anhydride*	0.04 lbs/hr

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U5 Components:

Emission Pt	Description	Control ID
E20	One (1) 1,540 gallon weigh tank	Uncontrolled
E21	One (1) 2,500 gallon weigh tank	
E22	One (1) 4.0 MMBtu/hr Hot Oil Heater	
E23	One (1) 3,300 gallon reactor designated as K9 with reflux condenser	C8/C12

U5 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C8	S-21 S-115	Condenser	Outlet gas stream temp	< 130 °F	Record keeping Daily	Semi-annual
C12	S-21 S-33	Venturi Scrubber	Pressure drop	3-6" H_2O	Record keeping Daily	Semi-annual

U5 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. PM (Regulation 7.08, Section 3)

      i. Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.1.1)

      ii. Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit. (section 3.3)

   b. VOC (Regulation 7.25, Section 3)

      i. No owner or operator shall construct or operate an affected facility unless it is equipped with an utilizes Best Available Control Technology (BACT) as determined at the time of the construction permit review by the District. Emission rates in terms of pounds per hour and/or work practice, equipment specifications, and/or raw material specifications shall be set out as permit conditions on the construction and/or operating permits to insure compliance with this requirement.

      ii. Affected facilities permitted prior to December 16, 1987, that emit no more emissions than that permitted at such date shall be deemed to be in compliance.

      iii. The time period for compliance determination shall not exceed 24 hours and may be less if limited by a permit restriction, but it shall not exceed the hours operated in a day.

      iv. The total plant-wide VOC emissions shall be less than or equal to 25 tons during any consecutive 12 month period for all emission units subject to Regulation 7.25.

   c. TAPs (Regulation 5.12)

      i. For those TAPs not specifically listed in the "Allowable Emissions" section on page 45 of this permit, the owner or operator shall not allow or cause the emissions of TAP's from Emission Units U5 and U6 to exceed the ASL value, unless modeling or a BACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall limit the hourly charging rate for trimelletic anhydride to no more than 852 lbs/hr averaged over an 8 hour period.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. PM

i. The owner or operator shall monitor and record the pressure drop across the venturi scrubber (C12) once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.a.

b. Opacity

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest ie, solid material is being introduced into the process) and daylight hours.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Subsequent visible emission surveys shall be conducted as specified in AC# 2.b.i.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

c. VOC

i. The owner or operator shall monitor and record the outlet gas stream temperature from condenser C8 once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.c.

d. TAPs

Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.d.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

a. Reactor Purge Emissions

$$\text{Purge emissions} = (R_{Vol})(C^i - C^f)$$

where:
R_{Vol} = Reactor volume
C^f = final VOC concentration in reactor
C^i = initial VOC concentration in reactor

b. VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where:
E_r = Emission Rate
P_t = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
$V = D_r/7.48$ gal per cu ft
$y_i = (x_i)(P)/P_t$

where:
$x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

c. VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$$E_B = (B_t)(C_R)$$

where:
E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. PM

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured for each operating day;
ii. The batch formulation including the name and weight % of each solid;
iii. The number of operating hours for each operating day;
iv. The hourly PM emissions;
v. Identification of all periods when control device C12 was not operating or bypassing occurred; and
vi. The results of the pressure drop readings required by AC # 2.a.i.

b. Opacity

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from AC #2.b.iii. above shall be documented and records made available to the District upon request.

c. VOC

The owner or operator shall maintain daily records of the following information:

i. The number of gallons of each batch manufactured;
ii. The batch formulation including the name and weight % of each VOC;
iii. The number of operating hours for each operating day; and
iv. The total VOC emissions for each calendar month as determined using the calculation methodology specified in AC # 3.
v. Identification of all periods when control device C8 was not operating or bypassing occurred; and
vi. The results of the gas stream temperature readings required by AC # 2.c.i.

d. TAPs

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.12.

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight percent of each TAP.
ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.
iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight percent of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration, then no further evaluation is required. If the weight percent of a TAP in the

new batch formulation exceeds the raw material usage rate used in the initial compliance demonstration, the owner or operator shall determine the emission rate of the TAP and demonstrate compliance with applicable emission standard.

5. **Reports** (Regulation 2.16, section 4.1.9.3)

a. PM

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 7.08:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for opacity:

i. Emission Unit ID number and Stack ID number;
ii. The beginning and ending date of the reporting period;
iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration;
iv. The date, time and results of each Method 9 conducted. If no Method 9 tests were conducted during the reporting period, the owner or operator may submit a negative declaration; and
v. Description of any corrective action taken pursuant to AC # 2.b.iii.

c. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for VOC:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. The twelve consecutive month VOC emissions for each month of the reporting period.

d. Control Devices C8 and C12

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control device C8:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Emission Unit U6 Description: One (1) resin production facility for synthetic resins including Acrylic, Alkyd, Polyester, and Copolymer.

U6 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
7.08	Standards of Performance for New Process Operations	1, 2, 3 and 5
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.18	Rule Effectiveness	1 through 3
5.12	Standards of Performance for New or Modified Sources Emitting Toxic Air Pollutants	1 through 5
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U6 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
VOC	See AC # 1. b.
PM	4.12 lbs/hr
Opacity	< 20 %

The following TAP emission limits are District Only Enforceable pursuant to Regulation 5.12.

Regulated Air Pollutant	Limit/Standard	Regulated Air Pollutant	Limit/Standard
Acrylamide*	0.08 lbs/hr	Phthalic anhydride*	1.57 lbs/hr
Ethyl acrylate*	8.68 lbs/hr	Trimellitic anhydride*	0.04 lbs/hr

*These pollutants were modeled and the allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U6 Components:

Emission Pt	Description	Control ID
E24	One (1) 1,540 gallon weigh tank	Uncontrolled
E25	One (1) 1,700 gallon reactor designated as K10 with reflux condenser	C10/C11/C12
E26	One (1) Catch tank	Uncontrolled

U6 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C10	S-31	Secondary Condenser	Outlet gas stream temp	< 130 °F	Record keeping Daily	Semi-annual
C11	S-31	Tertiary Condenser	Outlet gas stream temp	< 130 °F	Record keeping Daily	Semi-annual
C12	S-33	Venturi Scrubber	Pressure drop	3-6" H_2O	Record keeping Daily	Semi-annual

U6 Additional Conditions

1. **Standards** (Regulation 2.12, section 4.1.1)

   a. PM (Regulation 7.08, Section 3)

      i. Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.1.1)

      ii. Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit. (section 3.3)

   b. VOC (Regulation 7.25, Section 3)

      i. No owner or operator shall construct or operate an affected facility unless it is equipped with an utilizes Best Available Control Technology (BACT) as determined at the time of the construction permit review by the District. Emission rates in terms of pounds per hour and/or work practice, equipment specifications, and/or raw material specifications shall be set out as permit conditions on the construction and/or operating permits to insure compliance with this requirement.

      ii. Affected facilities permitted prior to December 16, 1987, that emit no more emissions than that permitted at such date shall be deemed to be in compliance.

      iii. The time period for compliance determination shall not exceed 24 hours and may be less if limited by a permit restriction, but it shall not exceed the hours operated in a day.

      iv. The total plant-wide VOC emissions shall be less than or equal to 25 tons during any consecutive 12 month period for all emission units subject to Regulation 7.25.

   c. TAPs

      i For those TAPs not specifically listed in the "Allowable Emissions" section on the page 51 of this permit, the owner or operator shall not allow the TAP emissions from Emission Units U5 and U6 to exceed the ASL value, unless modeling or a BACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall limit the hourly charging rate for trimelletic anhydride to no more than 852 lbs/hr averaged over an 8 hour period.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. PM

i. The owner or operator shall monitor and record the pressure drop across the venturi scrubber (C12) once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.a.

b. Opacity

i For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest ie, solid material is being introduced into the process) and daylight hours.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Subsequent visible emission surveys shall be conducted as specified in AC # 2.b.i. above.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

v. Any Method 9 tests performed shall meet the requirements of 40 CFR Part 60, Appendix A.

c. VOC

. i. The owner or operator shall monitor the outlet gas stream temperature from condensers C10 and C11 once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.c.

d. TAPs

Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.d.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall maintain records that demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

a. Reactor Purge Emissions

$$\text{Purge emissions} = (R_{Vol})(C^i - C^f)$$

where:
R_{Vol} = Reactor volume
C^f = final VOC concentration in reactor
C^i = initial VOC concentration in reactor

b. VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where:
E_r = Emission Rate
P_t = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
$V = D_r/7.48$ gal per cu ft
$y_i = (x_i)(P)/P_t$

where:
$x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

c. VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$$E_B = (B_t)(C_R)$$

where:

E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. PM

The owner or operator shall maintain daily records of the following information to demonstrate ongoing compliance with the PM emission limits.

i. The number of gallons of each batch manufactured for each operating day;
ii. The batch formulation including the name and weight percent of each solid;
iii. The number of operating hours for each operating day;
iv. The hourly PM emissions;
v. The identification of all periods when control device C12 was not operating or bypassingoccurredd; and
vi. The results of the pressure drop readings required by AC # 2.a.i.

b. Opacity

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from AC #2.b.iii. shall be documented and records made available to the District upon request.

c. VOC

The owner or operator shall maintain monthly records of the following information to demonstrate compliance with the VOC emission limits.

i. The number of gallons of each batch processed or manufactured;
ii. The batch formulation including the name and weight percent of each VOC;
iii. The number of operating hours for each operating day; and
iv. The total VOC emissions for each calendar month as determined using the calculation methodology specified in AC # 3.
v. The identification of all periods when control devices C10 and C11 were not operating or bypassing occurred; and
vi. The results of the gas stream temperature readings required by AC # 2.c.i.

d. TAPS

The owner or operator shall comply with the following monitoring requirements to demonstrate ongoing compliance with Regulation 5.12.

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight % of each TAP.
ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.
iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight percent of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration, then no further evaluation is required. If the weight percent of a TAP in the new batch formulation exceeds the raw material usage rate used in the initial compliance demonstration, the owner or operator shall determine the emission rate of the TAP and demonstrate compliance with applicable emission standard.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. PM

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for PM:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes; and
v. Description of any corrective action taken.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for opacity:

i. Emission Unit ID number and Stack ID number;
ii. The beginning and ending date of the reporting period;
iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration.
iv. The date, time and results of each Method 9 conducted. If no Method 9 tests are performed during the reporting period, the owner or operator may submit a negative declaration; and
v. Description of any corrective action taken pursuant to AC # 2.b.iii.

c. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for emission units subject to Regulation 7.25:

i. Emission Unit ID number
ii. The beginning and ending date of the reporting period; and
iii. The twelve consecutive month VOC emissions for each month of the reporting period.

d. Control Devices C10, C11 and C12

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control devices C10/11/12:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions. (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Emission Unit U7: Thindown tanks

U7 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2
40 CFR 63 Subpart A	General Provisions	63.1 through 63.15
40 CFR 63 Subpart OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	63.1400, 63.1401, 63.1402, 63.1403, 63.1406, 63.1410, 63.1413, 63.1414, 63.1415, 63.1416, 63.1417

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.18	Rule Effectiveness	1 through 3
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	1, 3.1, 3.54, 4, 5
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U7 Allowable Emissions:

Regulated Air Pollutant	**Limit/Standard**	
VOC	Class I Solvent	3 lbs/hr and 15 lbs/day
	Class II Solvent	8 lbs/hr and 40 lbs/day
	Class III Solvent	450 lbs/hr and 3000 lbs/day
TAPs	See AC # 1.b.	

U7 Components:

Emission Pt	Description	Applicable Regulations	Control ID
E31	One (1) Thindown tank 5,076 gallons (TT #7)	5.11	C13
		6.24	
E32	One (1) Thindown tank 5,076 gallons (TT #8)	5.11	C14
		6.24	
		40 CFR 63 Subpart OOO	
E33	One (1) Thindown tank 5,076 gallons (TT #9)	5.11	C15
		6.24	
		40 CFR 63 Subpart OOO	
E34	One (1) Thindown tank 5,076 gallons (TT #10)	5.11	C16
		6.24	
E35-36	Two (2) Thindown tanks 10,486 gallons each (TT #11-12)		C17 and C18
E37-39	Three (3) Thindown tanks 8,518 gallons each (TT #14-16)		Uncontrolled
E172-173	Two (2) Thindown tanks 8,000 gallons each (TT #17-18)		C22 and C23
E83-88	Six (6) Thindown tanks 8,518 gallons each (TT #19-24)		C24-C29

U7 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C13-C18 C22-C29	S40-45, S116-117 S66-71	Fourteen (14) Shell-and-Tube Condensers	Outlet gas stream temperature	< 130 °F	Record keeping Daily	Semi-annual

U7 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. **HAP** (40 CFR 63 Subpart OOO)

   The owner or operator shall comply with the standards as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

   b. **VOC** (Regulation 6.24, Section 3)

      i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (Section 3.1)

      ii. Class II Solvents - No owner or operator shall discharge into the atmosphere morethan 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.2)

      iii. Class III Solvents - No owner or operator shall discharge into the atmosphere morethan 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.3)

   c. **TAPs** (Regulation 5.11)

   For all Toxic Air Pollutants (TAPs) that are not regulated by 40 CFR 63 Subpart OOO: The owner or operator shall not allow or cause the emissions of TAP's to exceed the applicable ASL, unless a RACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

   a. **HAP** (40 CFR 63 Subpart OOO)

   The owner or operator shall comply with the monitoring as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

   b. **VOC**

i. The owner or operator shall monitor the outlet gas stream temperature from each condenser once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.b.

c. **TAPs**

Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.c.

3. **Daily Compliance with VOC Emission Standard** (Reg 1.05, section 4.1.2)

The owner or operator shall maintain records that demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

$$E_B = \frac{(G_v)/(D_r) * C_R}{60 \text{ min/hr}}$$

where:
E_B = Emission rate for event
G_v = Volume pumped to thin tank (gallons)
D_r = Pumping rate (gals/min)
C_R = Computer modeled condenser rate (lb/hr)

For thindown tanks without condensers:

$$E_R = \frac{(y_i)(V)(P_T)(MW)}{(R)(T)}$$

where:
E_R = Mass emission rate
y_i = mole fraction of VOC
V = vessel fill rate
P_T = pressure of the vessel vapor space
MW = molecular weight of VOC
R= ideal gas constant
T = temperature of vapor space
$P^{\#}$ = vapor pressure of VOC @ T
$P^{\#}$ calculated using Antoine's equation
y_i calculated using Rault's Law

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the recordkeeping as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall maintain daily records of the following information to demonstrate ongoing compliance with the VOC emission limits:

i. The number of gallons and weight % VOC of each batch processed or manufactured;
ii. The number of operating hours for each operating day; and
iii. The hourly and daily VOC emissions as determined using the calculation methodology specified in AC # 3.
iv. The identification of all periods when any control device was not operating or bypassing occurred; and
v. The results of the gas stream temperature readings required by AC # 2.b.i.

c. **TAPs**

The owner or operator shall monitor and maintain records of the weight % of each TAP for each batch of resin processed or manufactured.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the reporting as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.24:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly and daily VOC emission limits unit including the quantity of excess emissions; and
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes

c. **TAPs**

There are no compliance reporting requirements for this pollutant.

d. Control Devices

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control devices C13-18 and C22-29:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Summary information on the number, duration and cause of all excursions. (Excursion is defined as any departure from the performance indicator range established for the control device); and
v. Description of the corrective action taken for each excursion.

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29
2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14

Emission Unit U8 Description: Finished Product StorageTanks

U8 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.13	Standards of Performance for Existing Storage Vessels for Volatile Organic Compounds	1, 2, and 3.3
7.12	Standards of Performance for New Storage Vessels for Volatile Organic Compounds	1, 2, 3.3
40 CFR 63 Subpart A	General Provisions	63.1 through 63.14
40 CFR 63 Subpart OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	63.1400, 63.1401, 63.1402, 63.1403, 63.1406, 63.1410, 63.1413, 63.1414, 63.1415, 63.1416, 63.1417

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	1, 3.1, 3.54, 4, 5
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.12	Standards of Performance for New Sources Emitting Toxic Air Pollutants	1 through 5
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U8 Allowable Emissions:

Emission Pts	Regulated Air Pollutant	Limit/Standard
E40-E49; E89-E91; E126-E129 E81-E82; E92-E93; E163-E168	Ethyl benzene*	85.89 lbs/hr
	Xylene*	86.10 lbs/hr
	Toluene*	79.18 lbs/hr
	Other TAPs	See AC # 1.b.

	VOC	See AC # 1.b.
E176-E194	VOC	See AC # 1.b.
	TAPs	See AC # 1.c.
E195-E200	VOC	See AC # 1.b.
	TAPs	See AC # 1.c.
	HAPs	See AC # 1.a.

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with TAP Regulations", 4/87.

U8 Components:

Emission Pt	Description	Applicable Regulations
E40-41	Two (2) storage tanks designated as A and B 4,200 gallons each	5.11
		6.13
E42-46	Five (5) storage tanks designated as C, D, E, F and G 2,573 gallons each	5.11
		6.13
E47-49, E94	Four (4) storage tanks designated as H, i, J and K 5100 gallons each	5.11
		6.13
E81	One (1) 8,483 gallon storage tank designated as M	5.11
		6.13
E82	One (1) 6,007 gallon storage tank designated as L	5.11
		6.13
E89	One (1) 3,632 gallon storage tank designated as tank X	5.11
		6.13
E90, E91	Two (2) storage tanks designated as tanks FG-1 and FG-2 4,966 gallons each	5.11
		6.13
E92-93, E126-129	Six (6) storage tanks designated as tanks Y, Z, A-1, A-2, A-3 and A-4 10,231 gallons each	5.11
		6.13

Emission Pt	Description	Applicable Regulations
E163-168	Six (6) storage tanks designated as tanks RT-106 through RT-111 6,700 gallons each	5.11
		6.13
E176-E194	Nineteen (19) storage tanks designated as tanks FG-3 through FG-21 8,000 gallons each	5.12
		7.12
E195-E200	Six (6) finished product storage tanks 7800 gallons each	5.12
		7.12
		40 CFR 63 Subpart OOO

U8 Control Devices: There are no control devices associated with Emission Unit U8.

U8 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. **HAP** (40 CFR 63 Subpart OOO)

      The owner or operator shall comply with the standards as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

   b. **VOC** (Regulations 6.13 and 7.12)

      i. If the storage vessel has a storage capacity greater than 250 gallons, and if the true vapor pressure of the volatile organic compound, as stored, is equal to or greater than 1.5 psia, as a minimum it shall be equipped with a permanent submerged fill pipe. Storage vessels under this condition are exempt from the requirements of Sections 4 and 5 of District regulation 6.13. True vapor pressure "as stored" shall be determined on an instantaneous basis under conditions representing expected worst case conditions. (Regulation 7.12, section 3.3)

      ii. If the storage vessel has a storage capacity greater than 250 gallons, and if the true vapor pressure of the volatile organic compound, as stored, is equal to or greater than 1.5 psia, as a minimum it shall be equipped with a permanent submerged fill pipe.True vapor pressure "as stored" shall be determined on an instantaneous basis under conditions representing expected worst case conditions. (Regulation 6.13, section 3.3)

   c. **TAPs** (Regulations 5.11 and 5.12)

      For all Toxic Air Pollutants (TAPs) that are not regulated by 40 CFR 63 Subpart OOO: For those TAPs not specifically listed in the "Allowable Emissions" table on page 62, the owner or operator shall not allow or cause the emissions of TAP's to exceed the ASL value, unless modeling or a BACT/RACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

   a. **HAP** (40 CFR 63 Subpart OOO)

      The owner or operator shall comply with the monitoring as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

   b. **VOC**

See AC # 3.b. for record keeping requirements to monitor ongoing compliance with the VOC standards.

c. **TAPs**

See AC # 4.c. for record keeping requirements to monitor ongoing compliance with the PM emissions standard.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

VOC

The owner or operator shall perform monthly maintenance inspections of the conservation vents and tank lids to ensure proper operation.

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the recordkeeping as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall maintain records of tank inspections required by AC # 3.

c. **TAPs**

The owner or operator shall maintain records of the composition of each material stored and product throughput to demonstrate emissions are at or below the emission rates specified in the initial compliance demonstration (January 26, 1998).

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the reporting as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for VOC:

i. Emission Unit ID Number;
ii. Identification of all inspections not performed according to AC # 3.b.i. If no inspections were missed during the reporting period, the owner or operator may submit a negative declaration.

c. **TAPs**

There are no compliance reporting requirements for this pollutant.

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29
2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14

Emission Unit U9 Description: Resin Filtering

U9 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 & 5.2
40 CFR 63 Subpart A	General Provisions	63.1 through 63.15
40 CFR 63 Subpart OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	63.1400, 63.1401, 63.1402, 63.1403, 63.1406, 63.1410, 63.1413, 63.1414, 63.1415, 63.1416, 63.1417

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	1, 3.1, 3.54, 4, 5
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U9 Allowable Emissions:

Regulated Air Pollutant	**Limit/Standard**	
VOC	Class I Solvent	3 lbs/hr & 15 lbs/day
	Class II Solvent	8 lbs/hr & 40 lbs/day
	Class III Solvent	450 lbs/hr & 3000 lbs/day
TAPs	See AC # 1.c.	

U9 Components:

Emission Pt	**Description**	**Applicable Regulations**
E50	One (1) Filter press	5.11

		6.24
E51	One (1) Filter press	5.11
		6.24
		40 CFR 63 Subpart OOO
E52	One (1) Filter press #6	5.11
		6.24
E174	One (1) Filter press	
E175	One (1) Filter press	

U9 Control Devices: There are no control devices associated with emission Unit U9.

U9 Additional Conditions

1. **Standards**

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the standards as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC** (Regulation 6.24, Section 3)

i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.1)

ii. Class II Solvents - No owner or operator shall discharge into the atmosphere more than 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.2)

iii. Class III Solvents - No owner or operator shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (section 3.3)

c. **TAPs** (Regulation 5.11)

For all Toxic Air Pollutants (TAPs) that are not regulated by 40 CFR 63 Subpart OOO: The owner or operator shall not allow or cause the emissions of TAP's to exceed the ASL value unless a RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of any TAP subject to Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the net increase (the result of the algebraic sum of increases and decreases) in emission rate of any TAP will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the monitoring as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

See AC # 4.b. for record keeping requirements to monitor ongoing compliance with the VOC emissions standards.

c. **TAPs**

See AC # 4.c. for record keeping requirements to monitor ongoing compliance with the TAP emissions standards.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, Section 4.1.2)

The owner or operator shall maintain records that demonstrate compliance with the VOC emission standards using the following calculation methodology:

$$E_R = \frac{(y_i)(V)(P_T)(MW)}{(R)(T)}$$

where:
E_R = Mass emission rate
y_i = mole fraction of VOC
V = vessel fill rate
P_T = pressure of the vessel vapor space
MW = molecular weight of VOC
R= ideal gas constant
T = temperature of vapor space
$P^{\#}$ = vapor pressure of VOC @ T
$P^{\#}$ calculated using Antoine's equation
y_i calculated using Rault's Law

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the recordkeeping as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall maintain daily records of the following information to demonstrate ongoing compliance with the VOC emission limits.

i. The number of gallons and weight % VOC of each batch processed by each filter press;
ii. The number of operating hours for each operating day for each filter press;
iii. The hourly and daily VOC emissions as determined using the calculation methodology specified in AC # 3.

c. **TAPs**

The owner or operator shall maintain records of the weight % of each TAP processed by each filter press for each batch of resin produced to demonstrate ongoing compliance with Regulation 5.11.

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the reporting as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.24:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly and daily VOC emission limits including the quantity of excess emissions. If no exceedances occurred during the reporting period, the owner or operator may submit a negative declaration; and
iv. Reason for excess emissions whether process upset, control device malfunction, other known causes, or unknown causes

c. **TAPs**

There are compliance reporting requirements for this pollutant.

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29
2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14

Emission Unit U10 Description: Bulk loading facility for loading various resin products and organic compounds into tanks, tank trucks and drums.

U10 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.22	Standards of Performance for Existing Volatile Organic Materials Loading Facilities	1, 2, 3.1 & 3.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U10 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
VOC	See AC # 1.a.
n-Butyl alcohol*	32.75 lbs/hr
Toluene*	79.18 lbs/hr
Xylene*	86.10 lbs/hr
Misc TAPs	See AC # 1.b.

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U10 Components:

Emission Pt	Description	Control ID
E53	One (1) Bulk Volatile Organic Materials Loading Facility	Uncontrolled

U10 Control Devices: There are no control devices associated with Emission Unit U10.

U10 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. VOC (Regulation 6.22, Section 3.1)

      i. No owner or operator of any loading facility from which more than 200 gallons but less than 20,000 gallons of volatile organic materials are loaded in any one day shall load any volatile organic materials into any tank, truck, trailer, or railroad car from any loading facility unless such loading is accomplished by submerge fill, bottom loading, or equivalent methods approved by the District. Pneumatic, hydraulic, or other mechanical means shall be provided to prevent liquid organic compounds drainage from the loading device when it is removed from the hatch, or to accomplish complete drainage before such removal.

      ii. No owner or operator of any loading facility from which more than 20,000 gallons or more of volatile organic materials are loaded in any one day shall load any volatile organic materials unless such facility is equipped with a device which reduces the emissions of all hydrocarbon vapors and gases by at least 90% by weight, and which is properly installed, in good working order, and in operation. Loading shall be accomplished in such a manner that all displaced vapor and air will be vented only to the vapor recovery system. Measures shall be taken to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.

      iii. The total volatile organic material throughput shall not exceed 20,000 gallons for each operating day.

   b. TAPS (Regulation 5.11)

      For those TAPs not specifically listed in the "Allowable Emissions" section on page 68 of this permit, the owner or operator shall not allow or cause the emissions of TAP's to exceed the ASL value unless a RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of any TAP subject to Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the net increase (the result of the algebraic sum of increases and decreases) in emission rate of any TAP will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, Section 4.1.9.1.2)

a. VOC

The owner or operator shall monitor the total volatile organic materials throughput for each operating day.

b. TAPs

Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.b.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall maintain records that demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

$$F_L = 12.46 \frac{SPM}{T}$$

where:
F_L = Filling loss (lbs per 1000 gallons liquid filled)
M = Mole weight of vapors
P = Vapor pressure of liquid
T = Temperature of bulk liquid loaded
S = Saturation factor

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. VOC

The owner or operator shall maintain daily records of the total volatile organic materials throughput for each operating day.

b. TAPs

The owner or operator shall maintain records of the weight % of each TAP for each product loaded to demonstrate the emissions are equal to or less than the emission rates specified in the initial compliance demonstration (January 26, 1998).

5. **Reporting** (Regulation 2.16, Section 4.1.9.3)

a. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for VOC:

i. Emission Unit ID number
ii. The beginning and ending date of the reporting period

iii. Identification of all periods of exceedance of the daily product throughput limit; and
iv. Description of any corrective action taken to prevent future exceedances.

Emission Unit U11 Description: Wastewater treatment system for VOC removal

U11 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
7.12	Standards of Performance for New Storage Vessels for Volatile Organic Compounds	1, 2, and 3.3
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.18	Rule Effectiveness	1 through 3
5.12	Standards of Performance for New or Modified Sources Emitting Toxic Air Pollutants	1 through 5
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U11 Allowable Emissions:

Emission Pts	Regulated Air Pollutant	Limit/Standard
E54-61; E201-204	VOC	See AC # 1. a.
	TAPs	See AC # 1. b.

U11 Components:

Emission Pt	Description	Control ID
E54	One (1) 12,200 gallon wastewater holding tank	Uncontrolled
E55	One (1) 12,200 gallon filter feed tank	
E56	One (1) 6,700 gallon MPP wastewater feed tank	
E57	One (1) 6,700 gallon treated water staging tank	
E58	One (1) 20,000 gallon treated wastewater holding tank	
E59	One (1) 1,600 gallon skim holding tank	

Emission Pt	Description	Control ID
E60	Eight (8) 5,744 gallon wastewater skim pits	
E61	One (1) 10 gpm MPP treatment unit	C-19
E201-203	Three (3) 20,000 gallon treated water holding tank	Uncontrolled
E204	One (1) 55 gallon solvent decant storage drum	

U11 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C19	S62	Condenser	Outlet gas stream temperature	< 130 °F	Record keeping Daily	Semi-annual

U11 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. VOC (Regulation 7.25, Section 3)

      i. No owner or operator shall construct or operate an affected facility unless it is equipped with an utilizes Best Available Control Technology (BACT) as determined at the time of the construction permit review by the District. Emission rates in terms of pounds per hour and/or work practice, equipment specifications, and/or raw material specifications shall be set out as permit conditions on the construction and/or operating permits to insure compliance with this requirement.

      ii. Affected facilities permitted prior to December 16, 1987, that emit no more emissions than that permitted at such date shall be deemed to be in compliance.

      iii. The time period for compliance determination shall not exceed 24 hours and may be less if limited by a permit restriction, but it shall not exceed the hours operated in a day.

      iv. The total plant-wide VOC emissions shall be less than or equal to 25 tons during any consecutive 12 month period for all emission units subject to Regulation 7.25.

      v. The owner or operator shall not allow or cause any individual skim pit to contain more than two hundred (200) gallons of any VOC with a Reid vapor pressure of 0.5 psia or greater on any day without prior District approval and compliance with District Regulation 6.26.

      vi. The owner or operator shall not process more than 20,000 gallons of East St. Louis alkyd resin wastewater during any calendar month.

   b. TAPs

      The owner or operator shall not allow or cause the emissions of TAP's to exceed the applicable ASL value unless a BACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies. (Regulation 5.12)

2. **Monitoring** (Regulation 2.16, Section 4.1.9.1.2)

   a. VOC

i. The owner or operator shall monitor and record the quantity (each individual skim pit) of any VOC with a Reid vapor pressure of 0.5 psia or greater for each operating day.

ii. The owner or operator shall monitor the quantity of East St. Louis alkyd resin production facility wastewater treated during each calendar month.

b. TAPs

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.12.

The potential hourly emissions of all TAPs from the Wastewater Treatment Facility (U11) are below the ASL values specified in regulation 5.12, therefore; no monitoring is required, however, the owner or operator shall evaluate and document process changes to demonstrate that the emission levels established during initial compliance demonstration are not exceeded. If there is an increase in emission levels, the owner or operator shall determine the new emission rate and demonstrate compliance with the applicable emission standard.

3. **Wastewater Facility** - (Agreement - AKZO Letters dated 4/17/94, 5/2/94 & 5/19/94)

a. The owner or operator shall only process wastewater generated from this plant, except for one off-site wastewater stream that is generated by the East St. Louis alkyd resin production facility.

b. Every inlet port of the tank trucks shall be sealed by AKZO personnel before the truck leaves the AKZO East St. Louis plant. The seal shall bear the AKZO name and an identification code unique to that seal. The code(s) shall be noted on the shipping documents. All seals shall be checked for integrity and code match by AKZO personnel at the Louisville plant. If the seals are intact and the codes match the shipping documents, the wastewater may be processed. A sample of the shipment shall be retained by the East St. Louis plant until the shipment arrives at the Louisville plant and the seals have been determined to be intact and the codes match the shipping documents. If upon arrival at the Louisville plant, the seals are not in tact or the codes do not match the shipping documents, a sample from the truck shall be compared to the sample held in East St. Louis to determine whether the shipment has been altered enroute. The samples shall be compared by means of GC or Mass Spectrometry. Other analytical methods may be used subject to the approval of the District. The shipment shall not be processed by the Louisville facility until the results of the tests show that the samples are a match. If the samples are not a match, the shipment cannot be processed without prior approval by the District. If the tank truck has separate compartments, only the compartment with the damaged or mismatched seal is subject to this requirement. In the event that a seal must be broken in transport by an authorized inspector (DOT, ICC, State Police, etc.), that person may reseal the shipment with their own seal. The seal must display an organization identifier in addition to the seal identification number. A generic seal

is not acceptable. The agent who removes and replaces the seal must sign and print their name on the shipping document and must include their agency name, address and phone number.

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. VOC

The owner or operator shall maintain monthly records of the following information to demonstrate ongoing compliance with the VOC emission limits.

i. The total number of gallons of wastewater treated for each calendar month;
ii. The number of gallons of East St. Louis wastewater treated for each calendar month;
iii. The number of operating hours for each calendar; and
iv. The total VOC emissions for each calendar month.

b. TAPs

See AC # 2.b.

5. **Reporting** (Regulation 2.16, Section 4.1.9.3)

a. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 7.25:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. The twelve consecutive month VOC emissions for each month of the reporting period.

c Off-Site Wastewater Treatment

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for the monthly limit on processing East St. Louis wastewater:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. The total gallons of wastewater treated for each calendar month in the reporting period.

Emission Unit U13 Description: Raw Material Storage Tanks

U13 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.13	Standards of Performance for Existing Storage Vessels for Volatile Organic Compounds	1, 2 and 3.3
40 CFR 60 Subpart Kb	Standards of Performance for VOL Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	60.110b, 60.111b and 60.116b (a) & (b)
7.12	Standards of Performance for New Storage Vessels for Volatile Organic Compounds	1, 2, 3.3
40 CFR 63 Subpart A	General Provisions	63.1 through 63.15
40 CFR 63 Subpart OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	63.1400, 63.1401, 63.1402, 63.1403, 63.1406, 63.1410, 63.1413, 63.1414, 63.1415, 63.1416, 63.1417

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.18	Rule Effectiveness	1 through 3
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	1, 3.1, 3.54, 4, 5
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.12	Standards of Performance for New or Modified Sources Emitting Toxic Air Pollutants	1 through 5
5.14	Hazardous Air Pollutants and Source Categories	1 and 2
5.15	Chemical Accident Prevention Provisions	1

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.02	Federal New Source Performance Standards Incorporated By Reference	1, 2, 3, 4 and 5

U13 Allowable Emissions:

Emission Pts	Regulated Air Pollutant	Limit/Standard
E-11	Formaldehyde	BACT (See AC 1.b.ii.)
E-172-173	TAP	See AC # 1. b.
E95-124; E130-132	VOC	See AC # 1 .a. i & ii.
	Styrene*	39.19 lbs/hr
	Toluene*	79.18 lbs/hr
	Methyl Ethyl Ketone*	111.05 lbs/hr

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U13 Components:

Emission Pt	Applicable Regulation	Description	Control ID
E11	5.12, 5.15 7.12, 40 CFR 63 Subpart OOO and 40 CFR 68	One (1) 14,000 gallon formaldehyde storage tank designated as Tank 2. Installed in 1989	Vapor Balance System
E95-97, E99	5.11 & 6.13	Four (4) storage tanks designated as RM-6, RM-7, RM-8 and RM-12 8,518 gallons each	Uncontrolled
E-98	5.11 & 6.13	One (1) storage tank designated as RM-9 4,572 gallon	
E100-E115	5.11 & 6.13	Sixteen (16) storage tanks designated as TK-01 through TK-16 10,039 gallons each	
E116	5.11 & 6.13	One (1) storage tank designated as TK-17 14,100 gallons	

Emission Pt	Applicable Regulation	Description	Control ID
E117	5.11 & 6.13	One (1) storage tank designated as TK-18 20,238 gallons	
E118-E120	5.11 & 6.13	Three (3) storage tanks designated as RM-17, RM-16, and RM-15 23,499 gallons each	
E121 & E122	5.11 & 6.13	Two (2) storage tanks designated as RM-14 and RM-13 30,455 gallons each	
E123 & E124	5.11 & 6.13	Two (2) storage tanks designated as RM-18 and RM-19 9,400 gallons each	
E130-E132	5.11 & 6.13	Three (3) storage tanks designated as RM-33, RM-34 and RM-35 - 6,016 gallons each	
E-172	5.12 & 7.12 40 CFR 60 Subpart Kb	One storage tanks designated as TK-19 12,230 gallon	
E-173	5.12 & 7.12	One storage tank designated as W-19 2,320 gal	

U13 Control Devices: Emission Point E13 utilizes a vapor balance system to control the emissions of formaldehyde. All other Emission Points are uncontrolled.

U13 Additional Conditions

1. **Standards**

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the standards as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

i. If the storage vessel has a storage capacity greater than 250 gallons, and if the true vapor pressure of the volatile organic compound, as stored, is equal to or greater than 1.5 psia, as a minimum it shall be equipped with a permanent submerged fill pipe. Storage vessels under this condition are exempt from the requirements of Sections 4 and 5 of District regulation 6.13. True vapor pressure "as stored" shall be determined on an instantaneous basis under conditions representing expected worst case conditions. (Regulation 7.12, Section 3.3)

ii. If the storage vessel has a storage capacity greater than 250 gallons, and if the true vapor pressure of the volatile organic compound, as stored, is equal to or greater than 1.5 psia, as a minimum it shall be equipped with a permanent submerged fill pipe.True vapor pressure "as stored" shall be determined on an instantaneous basis under conditions representing expected worst case conditions. (Regulation 6.13, Section 3.3)

c. **TAPs** (Regulations 5.11 and 5.12)

i. For all Toxic Air Pollutants (TAPs) that are not regulated by 40 CFR 63 Subpart OOO: For those TAPs not specifically listed in the "Allowable Emissions" table on page 78, the owner or operator shall not allow or cause the emissions of TAP's to exceed the ASL value, unless modeling or a BACT/RACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

ii. The owner or operator shall utilize a vapor balance system at all times to return formaldehyde vapors to the tank truck that are displaced from storage tank E11 when loading formaldehyde solution. The vapor balance system is considered BACT for this emission point in accordance with Regulation 5.12.

d. **District Regulation 5.15 Regulated Substance** (40 CFR Part 68 Subpart G)

For Emission Point E11, the owner or operator shall comply with the Risk Management Plan for Regulation 5.15, which has been submitted to the District and to the U.S. EPA. (See Off-Permits Documents Section of this Permit for Plan Date)

2. **Monitoring** (Regulation 2.16, Section 4.1.9.1.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the monitoring as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

i. See AC # 3.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.

c. **TAPs**

i. Compliance monitoring shall consist of the record keeping requirement specified in AC # 4.b.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, section 4.1.2)

The owner or operator shall perform monthly maintenance inspections of the conservation vents and tank lids to ensure proper operation.

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the recordkeeping as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

i. The owner or operator shall maintain records of the inspections required by AC # 3.

ii. The owner or operator shall maintain the following records as required by 60.116b(b) of Subpart Kb.

Records showing the dimensions and an analysis showing the capacity of emission point. Emission point E-172 is not subject to any other provisions of Subpart Kb. These records shall be kept for the life of the storage tank.

c. **TAPs**

The owner or operator shall maintain records of each raw material stored and product throughput to demonstrate emissions are at or below the emission rates specified in the initial compliance demonstration (January 26,1998).

5. **Reporting**

a. **HAP** (40 CFR 63 Subpart OOO)

The owner or operator shall comply with the reporting as specified in 40 CFR 63 Subpart OOO. (See Appendix A of this permit for 40 CFR 63 Subpart OOO (MACT) Additional Conditions)

b. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 6.13 and 7.12:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. Identification of each occurrence that the monthly inspection required by AC # 3 was not performed. If all monthly inspections in the reporting period were performed, the owner or operator may submit a negative declaration.

c. **TAPs**

There are no compliance monitoring reports required for TAPs.

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29

2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14

Emission Unit U14: PD2 Building Coating Manufacturing

U14 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
6.09	Standards of Performance for Existing Process Operations	1, 2, 3.1, 3.2, 3.3, 3.4, 3.6 and 5
6.24	Standards of Performance for Existing Sources Using Organic Materials	1, 2, 3.2, 3.3, 4.1, 4.2, 5.1 and 5.2
6.43	Daily Emission Limits	1 through 5
7.08	Standards of Performance for New Process Operations	1, 2, 3.1, 3.2, and 3.3
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1 through 5
40 CFR 68	Chemical Accident Prevention Provisions	Subparts A, B, C, D, E, F, G and H

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2
5.15	Chemical Accident Prevention Provisions	Section 1

U14 Allowable Emissions:

Emission Pts	**Regulated Air Pollutant**	**Limit/Standard**	**Applicable Regulations**
E133-145	VOC Class II Solvent	8 lbs/hr & 40 lbs/day	6.24
E147-149	VOC Class III Solvent	450 lbs/hr & 3,000 lbs/day	
E150-162	PM	2.58 lbs/hr	6.09
	PM	20% Opacity	

Emission Pts	Regulated Air Pollutant	Limit/Standard	Applicable Regulations
E146	VOC	See AC # 1. b. iv.	7.25
	PM	2.34 lbs/hr	7.08
	PM	20% Opacity	
All Emission Pts	VOC	9.10 tons per month	6.43, Section 5
	Barium*	0.03 lbs/hr	5.11
	Formaldehyde	0.03 lbs/hr (ASL)	5.11
	Titanium Dioxide*	0.33 lbs/hr	5.11
	Misc TAPs	See AC # 1. c.	5.11

*These pollutants were modeled and the plant-wide allowable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U14 Components:

Emission Pts	Description	Control ID
E133, E134, E136	Three (3) storage tanks - 2,354 gallons each (L-1, L-2 & L4)	Uncontrolled
E135, E137, E139, E141	Four (4) storage tanks - 2,074 gallons each (L-3, L-5, L-7 & L-9)	
E138, E140, E142	Three (3) storage tanks - 1,272 gallons each (L-6, L-8 & L-10)	
E143	One (1) 4,466 gallon storage tank (L-11)	
E144	One (1) storage tank 706 gallons (L-12)	
E146	One (1) tank 706 gallons (L-15)	C20
E145	One (1) 1,591 gallon storage tank (L-14)	Uncontrolled
E147	One (1) 4,597 gallon storage tank (L-16)	
E148	One (1) 4,240 gallon storage tank (L-17)	
E149	One (1) 1,462 gallon storage tank (L-18)	
E150, E151	Two (2) tanks 1,428 gallons each (D-1 &D-2)	C20 & C21
E152, E153	Two (2) tanks 667 gallons each (D-3 & D-4)	C20 & C21

Emission Pts	Description	Control ID
E154-158	Five (5) storage tanks 667 gallons each (Tanks A, B, C, D & E)	Uncontrolled
E159	One (1) 16 gallon sandmill	
E160, E161	Two (2) sandmills 30 gallons each	
E162	One (1) Filtering and Filling System	

U14 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C20	S-109	Fabric Filter	Pressure drop	1-5" H_2O	Record keeping Daily	Semi-annual
C21	S-110	Fabric Filter	Pressure drop	1-5" H_2O	Record keeping Daily	Semi-annual

U14 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. **PM** (Regulations 6.09 and 7.08)

   Mass Emission Standard - For emissions from a control device or stack, the owner or operator shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit pursuant to Regulations 6.09 and 7.08.

   b. **Opacity**

   Opacity Standard - The owner or operator shall not allow or cause the continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity.

   c. **VOC** (Regulations 6.24, 6.43, and 7.25)

      i. Class I Solvents - No owner or operator shall discharge into the atmosphere more than 15 pounds of organic materials in any one day, or more than 3 pounds in any one hour, from any existing affected facility in which any Class I solvent is used unless said discharge has been reduced by at least 85% by weight. (Section 3.1)

      ii. Class II Solvents - No owner or operator shall discharge into the atmosphere more than 40 pounds of organic materials in any one day, or more than 8 pounds in any one hour, from any existing affected facility in which any Class II solvent is used unless said discharge has been reduced by at least 85% by weight. (Section 3.2)

      iii. Class III Solvents - No owner or operator shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, or more than 450 pounds in any one hour, from any existing affected facility in which any Class III solvent is used unless said discharge has been reduced by at least 85% by weight. (Section 3.3)

      iv. Regulation 7.25 - No owner or operator shall construct or operate an affected facility unless it is equipped with an utilizes Best Available Control Technology (BACT) as determined at the time of the construction permit review by the District. Emission rates in terms of pounds per hour and/or work practice, equipment specifications, and/or raw material specifications shall be set out as permit conditions on the construction and/or operating permits to insure compliance with this requirement. (Regulation 7.25, section 3.1)

1) Affected facilities permitted prior to December 16, 1987, that emit no more emissions than that permitted at such date shall be deemed to be in compliance. (Regulation 7.25, section 3.2)

2) The time period for compliance determination shall not exceed 24 hours and may be less if limited by a permit restriction, but it shall not exceed the hours operated in a day. (Regulation 7.25, section 3.3)

3) The total plant-wide VOC emissions shall be less than or equal to 25 tons during any consecutive 12 month period for all emission units subject to Regulation 7.25.

v. The owner or operator shall not allow or cause the combined VOC emissions from the PD2 coating manufacturing facility to exceed 9.10 tons per month. (Regulation 6.43, section 5.1)

d. **TAPs**

For those TAPs not specifically listed in the "Allowable Emissions" table on page 82, the owner or operator shall not allow or cause the emissions of TAP's to exceed the ASL value or a BACT/RACT analysis has been submitted and approved by the District. If there is an increase in emission levels, the owner or operator shall demonstrate, that for facilities subject to Regulation 5.11, that emissions of a TAP listed in Appendix B of Regulation 5.11 will be less than the ASL, based on potential to emit (PTE) and that the net increase (the result of the algebraic sum of increases and decreases) in emission rate of a TAP listed in Appendix B of Regulation 5.12 will not exceed the ASL regardless of whether the TAP of concern was or was not previously emitted. The decreases will be based on representative actual emissions and the increases will based on actual emissions. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. **PM**

i. The owner or operator shall monitor and record the pressure drop across the baghouses (C20 and C21) once each operating day.

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.a.

b. **Opacity**

i. The owner or operator shall conduct a weekly one (1) minute visible emission survey for each PM emission point during daylight hours and normal operation; or

ii. For emission points without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emission survey.

iii. At each emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Subsequent visible emission surveys shall be conducted as specified in AC # 2.b.i. above.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

c. **VOC**

i. The owner or operator shall comply with all applicable requirements specified in Regulation 6.43. The records and compliance demonstration required by Section 3 and the monitoring required by Section 4 of Regulation 6.43 shall including the following: (Regulation 6.43, Section 5)

1) Product name or number for each product manufactured during each day,
2) Density for each product, in pounds per gallon,
3) Daily production rate for each product, in gallons, and
4) Total daily VOC emissions.
5) The emissions calculations required by AC # 2.c.i.4. above shall be made using the following emission factors, unless a different emission factor is approved by the District:

30 pounds VOC per ton of product for solvent-based products
0.00191 pound per gallon of product for water-based products

ii. Additional compliance monitoring shall consist of the record keeping requirement specified in AC # 4.c.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, Section 4.1.2)

The owner or operator shall maintain monthly records that demonstrate compliance with the VOC emission standards using the following calculation methodology:

Paint produced (gallons/month) = G Weight per gallon (typical) = WPG
Control device efficiency = E NPCA emission factors = 30

Paint produced (pounds/month): $P_{lbs} = G*WPG$
Monthly VOC emissions (tons): $AvgTons_{Solv} = (P_{lbs}/2000) * 30 * (1-(E/100))$

4. **Record Keeping** (Regulation 2.16, Section 4.1.9.1.2)

a. **PM**

The owner or operator shall maintain daily records of the following information to demonstrate ongoing compliance with the PM emission limits.

i. The number of gallons of each batch of coating processed or manufactured;
ii. The formulation including the weight % of each solid for each batch of coating processed or manufactured;
iii. The number of operating hours for each operating day; and
iv. The hourly PM emissions.

b. **Opacity**

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed.

c. **VOC**

The owner or operator shall maintain daily records of the following information to demonstrate ongoing compliance with the Regulations 6.24 and 7.25:

i. The number of gallons of each batch of coating processed or manufactured;
ii. The batch formulation including the weight % VOC for each batch of coating processed or manufactured;
iii. The number of operating hours for each operating day; and
iv. The hourly, daily, and monthly VOC emissions.

d. **TAPs**

The owner or operator shall maintain records of the formulation for each batch of coating produced, including the weight % of each TAP, to demonstrate emissions are at or below the rates specified in the initial compliance demonstration (January 26, 1998).

5. **Reporting** (Regulation 2.16, Section 4.1.9.3)

a. **VOC**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for VOC:

i. Emission Unit/Point ID number;
ii. The beginning and ending date of the reporting period;
iii. Total VOC emissions for each calendar month in the reporting period; and
iv. Identification of all periods of exceedances of the hourly, daily and monthly VOC emission limits unit including the quantity of excess emissions.

b. **PM**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for PM:

i. Emission Unit/Point ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission limit including the quantity of excess emissions;
iv. Summary information on the number, duration and cause of all excursions. Excursion is defined as any departure from the performance indicator range.
v. Description of the corrective action taken for each excursion .

c. **Opacity**

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for opacity:

i. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration; and
ii. The date, time and results of each Method 9 conducted.

d. Control Devices C20 and C21

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for control devices C20 and C21:

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Summary information on the number, duration and cause of all excursions. (Excursion is defined as any departure from the performance indicator range established for the control device); and
v. Description of the corrective action taken for each excursion.

Emission Unit U15 Description: Three natural gas only fired boilers (10.46 MMBtu/hr each)

U15 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4.1.3, 4.2, 5.1.1 and 8

U15 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
SO_2	1.0 lb/MMBtu heat input
PM	0.41 lb/MMBtu heat input
Opacity	20%

U15 Components:

Emission Pt	Description	Control ID
E169	One (1) Reliance boiler installed in 1966	N/A
E170 & E171	Two (2) Kewanee boilers installed in 1973	

Monitoring, Recordkeeping and Reporting Requirements:

Emission Unit/Pt	Parameter	Limit	Required Monitoring	Monitoring Frequency	Reporting Frequency
U15	Fuel Usage	None	Recordkeeping	Monthly	Annual (SAMS)

U15 Control Devices: There are no control devices associated with this Emission Unit.

Comments

1. Calculations of potential uncontrolled SO_2 and PM emissions using the applicable AP-42 emission factors demonstrate that the SO_2 and PM emission standards specified in Regulation 7.06 cannot be exceeded when combusting natural gas, therefore, no additional record keeping is required.

2. The company is not required to perform periodic monitoring to demonstrate ongoing compliance with the opacity standard. The District has determined that it is highly unlikely that these small natural gas fired boilers would exceed the 20% opacity standard.

Emission Unit U16 Description: Polyester resin reactor

U16 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.08	Standards of Performance for New Process Operations	1, 2, 3.1, 3.2, and 3.3
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1 through 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.12	Standards of Performance for New Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U16 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
VOC	See AC #1.b.
TAPs	See AC #1.c.
PM	2.34 lbs/hr
Opacity	20%

U16 Components:

Emission Pt	Description	Control ID
E-174	55 gallon reactor designated as K11	N/A

U16 Control Devices: There are no control devices associated with Emission Unit U16.

U16 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. PM (Regulation 7.08, Section 3)

      i. Opacity Standard - No person shall cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity. (section 3.1)

      ii. Mass Emission Standard - For emissions from a control device or stack, no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of the quantity specified in this permit as determined using Table 1 of Regulation 7.08. (section 3.3)

   b. VOC (Regulation 7.25)

      i. No owner or operator shall construct or operate an affected facility unless it is equipped with an utilizes Best Available Control Technology (BACT) as determined at the time of the construction permit review by the District. Emission rates in terms of pounds per hour and/or work practice, equipment specifications, and/or raw material specifications shall be set out as permit conditions on the construction and/or operating permits to insure compliance with this requirement.

      ii. Affected facilities permitted prior to December 16, 1987, that emit no more emissions than that permitted at such date shall be deemed to be in compliance.

      iii. The time period for compliance determination shall not exceed 24 hours and may be less if limited by a permit restriction, but it shall not exceed the hours operated in a day.

      iv. The total plant-wide VOC emissions shall be less than or equal to 25 tons during any consecutive 12 month period for all emission units subject to Regulation 7.25.

   c. TAPs

      The owner or operator shall not allow or cause the emissions of TAP's to exceed the ASL value specified in Regulation 5.12, unless modeling or a BACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. PM

Compliance monitoring for the PM mass emission standard shall be the record keeping requirement in AC # 3.a.

b. Opacity

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest, i.e., solid material is being introduced into the process) and daylight hours. No more than four Emission Points shall be observed simultaneously.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Any Method 9 tests performed shall meet the requirements of 40 CFR Part 60, Appendix A. Subsequent visible emission surveys shall be conducted as specified in AC # 2.b.i.

iv. If an emission point is not being operated during the observation period, then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated.

c. VOC

The owner or operator shall monitor the batch formulation and throughput for each batch of resin processed or manufactured in this emission unit.

3. **Record Keeping** (Regulation 2.16, section 4.1.9)

a. PM

The owner or operator shall maintain daily records of the following information to demonstrate ongoing compliance with the PM emission limits.

i. The number of gallons of each batch processed or manufactured;
ii. The batch formulation including the weight percent of each solid material for each batch processed or manufactured;

iii. The number of operating hours for each operating day; and
iv. The hourly PM emissions.

b. Opacity

The owner or operator shall maintain records of the results of all visible emission surveys and tests. The visible emission survey records shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. Any correction actions resulting from AC# 2.b.iii. above shall be documented and records made available to the District upon request.

c. VOC

The owner or operator shall maintain monthly records of the following information to demonstrate ongoing compliance with the VOC emission limits.

i. The number of gallons of each batch processed or manufactured;
ii. The batch formulation including the weight percent VOC for each batch of resin processed or manufactured;
iii. The number of operating hours for each operating day; and
iv. The total VOC emissions for each calendar month.

d. TAPs

The owner or operator shall maintain records of the formulation for each batch of resin produced, including the weight % of each TAP.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. PM

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 7.08:

i. Emission Unit ID Number**;**
ii. The beginning and ending date of the reporting period;
iii. Identification of all periods of exceedances of the hourly PM emission standard including the quantity of excess emissions; and
iv. Description of any corrective action taken to prevent future exceedances.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for opacity:

i. Emission Unit ID number and Stack ID number
ii. The beginning and ending date of the reporting period

iii. The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If no visible emissions were observed during the reporting period, the owner or operator may submit a negative declaration.
iv. The date, time and results of each Method 9 conducted
v. Description of any corrective action taken pursuant to AC # 2.b.iii.

c. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for Regulation 7.25:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period;
iii. The number of operating hours for each calendar month; and
iv. The total consecutive 12-month VOC emissions for each calendar month in the reporting period

Emission Unit U17 Description: Drum Filling Station for loading various resin products and organic compounds into drums.

U17 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 4.1 and 5
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1 through 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.12	Standards of Performance for New Sources Emitting Toxic Air Pollutants	1 through 6
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U17 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
VOC	See AC # 1.a.
n-Butyl alcohol*	32.75 lbs/hr
Toluene*	79.18 lbs/hr
Xylene*	86.10 lbs/hr
Misc TAPs	See AC # 1.b.

*These pollutants were modeled and the plant-wide allowable District Only Enforceable emission limits were calculated using the equation in Section 4.6 of "Guidance to Demonstration of Compliance with Toxic Air Pollutant Regulations", 4/87.

U17 Components:

Emission Pt	Description	Control ID
E201	One (1) Drum Filling Station	N/A

U17 Control Devices: There are no control devices associated with Emission Unit U17.

U17 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. VOC (Regulation 7.25, Section 3)

      i. No owner or operator shall construct or operate an affected facility unless it is equipped with an utilizes Best Available Control Technology (BACT) as determined at the time of the construction permit review by the District. Emission rates in terms of pounds per hour and/or work practice, equipment specifications, and/or raw material specifications shall be set out as permit conditions on the construction and/or operating permits to insure compliance with this requirement.

      ii. Affected facilities permitted prior to December 16, 1987, that emit no more emissions than that permitted at such date shall be deemed to be in compliance.

      iii. The time period for compliance determination shall not exceed 24 hours and may be less if limited by a permit restriction, but it shall not exceed the hours operated in a day.

      iv. The total plant-wide VOC emissions shall be less than or equal to 25 tons during any consecutive 12 month period for all emission units subject to Regulation 7.25.

   b. TAPs

      For those TAPs not specifically listed in the "Allowable Emissions" table on page 94, the owner or operator shall not allow or cause the emissions of TAPs to exceed the ASL value specified in Regulation 5.12, unless modeling or a BACT analysis has been submitted and approved by the District. When additional emission limits for the same pollutants are imposed by other regulations, the more stringent limit applies.

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

   a. VOC

      The owner or operator shall monitor the formulation and throughput for each product processed in this emission unit.

   b. TAPs

      See AC # 4.b.

3. **Daily Compliance with VOC Emission Standard** (Regulation 1.05, Section 4.1.2)

The owner or operator shall demonstrate daily compliance with the VOC emission standards using the following calculation methodology:

$$F_L = 12.46 \frac{SPM}{T}$$

where:
F_L = Filling loss (lbs per 1000 gallons liquid filled)
M = Mole weight of vapors
P = Vapor pressure of liquid
T = Temperature of bulk liquid loaded
S = Saturation factor

4. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. VOC

The owner or operator shall maintain records of the results of each parameter being monitored as specified in AC # 2.a. above. Records shall include the monthly VOC emissions as determined using the calculation methodology specified in AC # 3.

b. TAPs

The owner or operator shall maintain records of the formulation including the weight percent of each TAP for each product processed to demonstrate the emissions are equal to or less than the emission rates specified in the initial compliance demonstration (January 26, 1998).

5. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. VOC

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for VOC:

i. Emission Unit ID number;
ii. The beginning and ending date of the reporting period; and
iii. The total consecutive 12-month VOC emissions for each calendar month in the reporting period.

Emission Unit U18 Description: Sag Control Agents

U18 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1, 2, 4, and 5
7.08	Standards of Performance for New Process Operations	1, 2, and 3
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1 through 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.12	Standards of Performance for New Sources Emitting Toxic Air Pollutants	1 through 5
5.14	Hazardous Air Pollutants and Source Categories	1 and 2

U18 Allowable Emissions:

Regulated Air Pollutant	Limit/Standard
VOC	25 tpy and 2.08 tons/month
PM	3.0 lbs/hr
Opacity	< 20%
TAP	<ASL

U18 Components:

Emission Pt	Description	Applicable Regulation	Control ID
E205	One (1) 1,000 gallon reactor (K-12)	5.12	C29
		7.08	
		7.25	
E206-E208	Three (3) 160 gallon weigh tanks	5.12	Uncontrolled
		7.25	

Emission Pt	Description	Applicable Regulation	Control ID
E209	One (1) 110 gallon weigh tank	5.12	Uncontrolled
		7.25	

U18 Control Devices:

ID	Stack ID	Description	Performance Indicator	Range	Monitoring & Frequency	Reporting Frequency
C29	S-26/33	Shell-and-Tube Condenser	Temperature	<= 90°F	Record keeping Daily	Semi-annual

U18 Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)

   a. **PM** (Regulation 7.08, Section 3.1.2)

   For emission point E-205 (reactor K-12): The owner or operator shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility that is in excess of 3.0 lb/hr. (See Comment 3)

   b. **Opacity** (Regulation 7.08, Section 3.1.1)

   For emission point E-205 (reactor K-12): The owner or operator shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity.

   c. **VOC** (See Comments 1 & 2)

   For emission points E-(205 - 209)subject to Regulation 7.25:

   i. The total combined plant wide VOC emissions from all emission points subject to Regulation 7.25 that are not subject to a BACT determination, shall be less than or equal to 25 tons during any consecutive 12 month period. (Regulation 7.25, section 3)

   ii. The total combined plant wide VOC emissions from all emission points subject to Regulation 7.25 that are not subject to a BACT determination, shall be less than or equal to 2.08 tons per month.

   d. **TAPs** (Regulation 5.12, section 1)

   i. Toxic Air Pollutant emissions from Emission Unit U-18 are limited to the Adjusted Significance Level emission rates calculated with a stack height of twenty-two (22) feet for E-205 (reactor K-12), twelve (12) feet for each E-(206-209) (weigh tanks), and one hundred sixty-eight (168) hours of operation, unless modeling or a BACT analysis has been submitted and approved by the District.

   ii. The owner or operator shall not exceed the following emission limits: (See Comment 4)

Pollutant	Average Hourly Emission Rate
Xylene	6.882 lbs
Ethyl benzene	6.882 lbs

2. **Monitoring** (Regulation 2.16, section 4.1.9.1.2)

a. **PM**

For emission point E-205 (reactor K-12): See Additional Condition 3.a.

b. **Opacity**

For emission point E-205 (reactor K-12):

i. For each PM emission point, the owner or operator shall conduct a weekly one (1) minute visible emission survey during normal operation (during the time period when PM emissions would expected to be the highest ie, solid material is being introduced into the process) and daylight hours.

ii. For each PM emission point without observed visible emissions during twelve (12) consecutive operating weeks, the owner or operator may elect to conduct a monthly visible emissions survey.

iii. At each PM emission point, where visible emissions are observed, the owner or operator shall initiate corrective action within 8 hours of the initial observation. If the visible emissions persist, the owner or operator shall perform a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07 and take all practicable steps to eliminate the exceedance. Subsequent visible emission surveys shall be conducted as specified in Addition Condition 2.b.i. above.

c. **VOC**

i. For emission point E-205 (reactor K-12): The owner or operator shall monitor and record the outlet gas stream temperature from the shell-and-tube condenser (C-29) once each operating day. The standard operating range is less than or equal to 90 degrees F.

ii. For emission points E-(205-209) (reactor K-12 and weigh tanks): See Additional Condition 3.c.(ii. & iii.).

d. **TAPs**

See Additional Condition 3.d.

3. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **PM**

i. The owner or operator shall maintain daily records of the following information:

(a) The pounds yielded on each batch manufactured for each operating day;
(b) The batch formulation including the weight % of all solids; and
(c) The batch cycle time for each batch.

ii. The owner or operator shall calculate monthly the average hourly PM emissions information contained in Additional Condition 3.a.i.

b. **Opacity**

The owner or operator shall maintain records of the results of all visible emission surveys and tests. Records of the results of any visible emission survey shall include the date and time of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given day (or week or month, as appropriate), then no visible emission survey needs to be performed and a negative declaration may be entered in the record. The owner or operator shall maintain sufficient records to verify the emission point was not being operated. Records made available to the District upon request.

c. **VOC**

i. The owner or operator shall maintain daily records of the shell-and-tube condenser temperature as required by Additional Condition 2.c.

ii. For emission points E-(205-209): The owner or operator shall maintain daily records of the following information:

(a) The pounds yielded on each batch manufactured for each operating day;
(b) The batch formulation including the name and weight % of each VOC; and
(c) The batch cycle time for each batch.

iii. For emission points E-(205-209): The owner or operator shall calculate, each month, the monthly and 12 consecutive month VOC emissions utilizing the information contained in Additional Condition 3.c.ii. and the following calculation methodology:

(a) Reactor Purge Emissions:

Purge emissions = $(R_{Vol})(C^i-C^f)$

where: R_{Vol} = Reactor volume
Cf = final VOC concentration in reactor
Ci = initial VOC concentration in reactor

(b) VOC emissions from raw material addition:

$$E_r = \frac{(y_i)(V)(P_t)(Mw)}{(R)(T)}$$

where: E_r = Emission Rate
Pt = Pressure = 760 mmHg
D_r = Displacement rate = Pumping rate
Mw = mole weight (lb/lbmol)
R = Gas Law Constant
V = D_r/7.48 gal per cu ft
$y_i = (x_i)(P)/P_t$
T = Temperature (°K)

where: $x_i = 1$
P = vp of VOC @ 25°C
P_t = 1 atm = 760 mmHg

(c) VOC emissions (resin cook) from condenser vents (lb/hr) using computer model (per batch):

$$E_B = (B_t)(C_R)$$

where: E_B = Emission rate for event (lbs)
B_t = Batch refluxing time (hrs)
C_R = Computer modeled condenser emission rate (lb/hr)

d. **TAPs**

The owner or operator shall comply with the following requirements to demonstrate ongoing compliance with Regulation 5.12. (See Comment 4)

i. For each batch of resin produced, the owner or operator shall maintain records of the formulation including the name and weight percent of each TAP.

ii. For each batch of resin produced, the owner or operator shall maintain records of the batch processing time.

iii. Prior to charging the reactor, the owner or operator shall evaluate the new batch components based on batch formulation information to determine if the weight percent of each TAP exceeds the quantity used in the initial compliance demonstration. If the new batch formulation does not exceed the raw material usage rates specified in the initial compliance demonstration, then no further evaluation is required. If the weight percent of a TAP in the new batch formulation exceeds the raw material usage rate used in the initial compliance demonstration, the owner or operator shall determine the

emission rate of the TAP and demonstrate compliance with applicable emission standard.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual compliance reports. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for the following category:

a. **PM**

For emission point E-205 (reactor K-12):

i. Emission Unit ID number, Stack ID number, and/or emission point ID number;
ii. The beginning and ending date of the reporting period;
iii. Identify all periods of exceedance of the PM emission standard and include the quantity of excess emissions; and
iv. Description of any corrective action taken for each exceedance.

b. **Opacity**

For emission point E-205 (reactor K-12):

i. Emission Unit ID number, Stack ID number, and/or emission point ID number;
ii. The beginning and ending date of the reporting period;
iii. The number of surveys where visible emissions were observed;
iv. The date, time and results of each Method 9 that exceeded the opacity standard; and
v. Description of any corrective action taken for each exceedance.

c. **VOC**

For all emission points subject to Regulation 7.25:

i. Emission Unit ID number and emission point ID number;
ii. The beginning and ending date of the reporting period;
iii. Individual calendar month and 12 consecutive month VOC emissions in the reporting period;
iv. Identify all periods of exceedance of the plant wide VOC emission limits including the quantity in excess of the limit; and
v. Description of any corrective action taken for each exceedance.

d. **TAPs**

i. Emission unit ID number;

ii. The beginning and ending date of the reporting period; and
iii. Summary report for any TAP compliance evaluations required by Additional Condition 3.d.iii. The summary report shall include the name of each TAP evaluated, hourly emission calculations, and results of the compliance analysis.

f. **Control Device**

i. Emission Unit ID number and Control ID number;
ii. The beginning and ending date of the reporting period;
iii. Identification of the operating parameter being monitored to demonstrate ongoing compliance;
iv. Identification of all periods of control device bypassing or downtime;
v. Summary information on the number, duration and cause of all excursions (Excursion is defined as any departure from the performance indicator range); and
vi. Description of the corrective action taken for each excursion.

Comments

1. The Title V operating permit (#120-97-TV) contains a less than or equal to 25 ton per year plant wide VOC limit for all equipment subject to Regulation 7.25, the company requested to keep the same emission limit (i.e. no increase in emissions) and the reactor is controlled by a shell-and-tube condenser, which the District has determined meets the BACT requirements of Regulation 7.25. This is based on the potential uncontrolled VOC emission from this project being 14.4 tons per year and control technology such as thermal oxidation or flares would not be cost effective.

2. The potential uncontrolled VOC emissions from this project are 14.4 tons per year (discounting the 85% control efficiency on the condenser (C-29) on the reactor) which is below the significant level of <40 tons per year, therefore, Regulation 2.05 *Prevention of Significant Deterioration of Air Quality* does not apply and a netting analysis is not required.

3. The regulatory allowable PM emissions from this modification are 13.14 tons per year which is below the significant level of <25 tons per year for PM and <15 tons per year for PM_{10}, therefore, Regulation 2.05 *Prevention of Significant Deterioration of Air Quality* does not apply and a netting analysis is not required.

4. Based on source submitted potential emission calculations, the potential emission for all the TAPs used, for this project, can not exceed the ASL. Therefore, no additional compliance monitoring or record keeping is required for this equipment.

Permit Shield

The owner or operator has requested and is hereby granted a permit shield. The permit shield applies as long as the owner or operator operates in accordance with the terms and conditions of this permit. The following NSPS rules have been reviewed by the District and determined not to be applicable to the emission units and/or emission points listed.

40 CFR Part 60, Subpart Dc

Standards of Performance for Industrial-Commercial - Institutional Steam Generating Units. Emission Unit U-15 was installed prior to June 1989.

40 CFR Part 60, Subpart Kb

Standards of Performance for Volatile Organic Liquid Storage Vessels.
Emission Points E54-55, E62-66, E117-122 were installed prior to July 1984.

Off-Permit Documents

Document	Date
112(r) Risk Management Plan	June 1999
Rule Effectiveness Plan (Reg 1.18)	September 1994

Alternative Operating Scenarios

The owner or operator did not request to operate under any alternative operating scenarios in its Title V permit application.

Source-wide Hap Speciation			
HAP	**CAS No.**	**HAP**	**CAS No.**
Acrylamide	79-06-1	Methyl Ethyl Ketone	78-93-3
Acrylic Acid	79-10-7	Methyl Isobutyl Ketone	108-10-1
Cumene	98-82-8	Methyl Methacrylate	80-62-6
Ethyl Benzene	100-41-4	Naphthalene	91-20-3
Ethylene Glycol	107-21-1	Phenol	108-95-2
Formaldehyde	50-00-0	Phthalic Anhydride	85-44-9
Hydroquinone	123-31-9	Styrene	100-42-5
Maleic Anhydride	108-31-6	Toluene	108-88-3
Methanol	67-56-1	Xylene	1330-20-7

Note: HAPs cited in the table above are those currently known to be used at this plant and were identified in the Title V permit application.

Insignificant Activities		
Description	**Quantity**	**Basis**
20,238 gallon Diesel Fuel Storage Tank	1	Regulation 2.02, section 2.3.9.2 Installation Date - 1968
Natural gas fired boilers	2	Regulation 2.02, section 2.1.1
R&D Facility	1	Regulation 2.02, section 2.3.27
Internal Combustion Engines 4 - propane fired lift trucks 2 - propane fired welders 1- gasoline yard tractor	7	Regulation 2.02, section 2.2
Non-halogenated Cold Solvent Parts Cleaners	3	Regulation 2.02, section 2.3.22

1. Insignificant Activities are only those activities or processes falling into the general categories defined in District Regulation 2.02, Section 2, and not associated with a specific operation or process for which there is a specific regulation. Equipment associated with a specific operation or process (Emission Unit) shall be listed with the specific process even though there may be no applicable requirements. Information contained in the permit and permit summary shall clearly indicate that those items identified with negligible emissions have no applicable requirements.

2. Activities identified In District Regulation 2.02, Section 2, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source and must be included in the Title V permit.

    i. Non-halogenated cold solvent parts cleaners shall be operated in compliance with all applicable sections of District Regulations 6.18 and 7.18, including Section 4 of each.

    ii. No facility, having been designated as an insignificant activity, shall be exempt from any generally applicable requirement which shall include a 20% opacity limit for facilities not otherwise regulated.

    iii. No periodic monitoring shall be required for facilities designated as insignificant activities.

Appendix A

40 CFR 63 Subpart OOO (MACT) Additional Conditions

1. **Standards**

a. **HAP (Non-LDAR)** (40 CFR 63 Subpart OOO)

i. For storage tanks E11, E195-E200, there are no emission standards from 40 CFR 63 Subpart OOO.

ii. For non-reactor batch process vents E12-E14, E17, E19, E31, E32, E51, and E210, there are no emission standards from 40 CFR 63 Subpart OOO. (See Comment 1)

iii. For reactor batch process vents E15 and E18, the owner or operator shall reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 kilogram of organic HAP per megagram of product or less for solvent-based resin production. (40 CFR 63.1406(a)(2)(iii))

b. **HAP (LDAR)** (40 CFR 63 Subpart OOO)

i. For valves in light liquid or vapor service, the instrument reading that defines a leak is 500 parts per million or greater. (40 CFR 63.1025(b)(2) as referenced by 40 CFR 63.1410)

ii. For pumps in light liquid service, the instrument reading that defines a leak is specified in Additional Conditions 1.b.ii.1) through 1.b.ii.3). (40 CFR 63.1026(b)(2) as referenced by 40 CFR 63.1410)

1) 5,000 parts per million or greater for pumps handling polymerizing monomers; (40 CFR 63.1026(b)(2)(i) as referenced by 40 CFR 63.1410)

2) 1,000 parts per million or greater for all other pumps. (40 CFR 63.1026(b)(2)(iii) as referenced by 40 CFR 63.1410)

3) For pumps to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected. (40 CFR 63.1026(b)(3) as referenced by 40 CFR 63.1410)

iii. For connectors in gas/vapor and light liquid service, if an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. (40 CFR 63.1027(b)(2) as referenced by 40 CFR 63.1410)

iv. For agitators in gas/vapor and light liquid service, if an instrument reading equivalent of 10,000 parts per million or greater is measured, a leak is detected. (40 CFR 63.1028(c)(2) as referenced by 40 CFR 63.1410)

v. Equipment subject to 40 CFR 63 Subpart UU shall be identified. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, by designation of process unit or affected facility boundaries by some form of weatherproof identification, or by other appropriate methods. (40 CFR 63.1022(a) as referenced by 40 CFR 63.1410)

vi. Additional equipment identification. In addition to the general identification required by Additional Condition 1.b.v., equipment subject to any of the provisions in 40 CFR 63.1023 through 63.1034 shall be specifically identified as required in Additional Conditions 1.b.vi.1) through 5), as applicable. This paragraph does not apply to an owner or operator of a batch product process who elects to pressure test the batch product process equipment train pursuant to 40 CFR 63.1036. (40 CFR 63.1022(b) as referenced by 40 CFR 63.1410)

1) Connectors. Except for inaccessible, ceramic, or ceramic-lined connectors meeting the provision of 40 CFR 63.1027(e)(2) and instrumentation systems identified pursuant to Additional Condition 1.b.vi.4), identify the connectors subject to the requirements of 40 CFR 63 Subpart UU. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR 63 Subpart UU are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the identification shall be complete no later than the completion of the initial survey required by Additional Condition 1.b.v. (40 CFR 63.1022(b)(1) as referenced by 40 CFR 63.1410)

2) Routed to a process or fuel gas system or equipped with a closed vent system and control device. Identify the equipment that the owner or operator elects to route to a process or fuel gas system or equip with a closed vent system and control device, under the provisions of §63.1026(e)(3) (pumps in light liquid service), 40 CFR 63.1028(e)(3) (agitators), 40 CFR 63.1030(d) (pressure relief devices in gas and vapor service), 40 CFR 63.1031(e) (compressors), or 40 CFR 63.1037(a) (alternative means of emission limitation for enclosed-vented process units). (40 CFR 63.1022(b)(2) as referenced by 40 CFR 63.1410)

3) Pressure relief devices. Identify the pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.1030(e). (40 CFR 63.1022(b)(3) as referenced by 40 CFR 63.1410)

4) Instrumentation systems. Identify instrumentation systems subject to the provisions of 40 CFR 63.1029. Individual components in an instrumentation system need not be identified. (40 CFR 63.1022(b)(4) as referenced by 40 CFR 63.1410)

5) Equipment in service less than 300 hours per calendar year. The identity, either by list, location (area or group), or other method, of equipment in regulated material service less than 300 hours per calendar year within a process unit or affected facilities subject to the provisions of 40 CFR 63 Subpart UU shall be recorded. (40 CFR 63.1022(b)(5) as referenced by 40 CFR 63.1410)

vii. Special equipment designations: Equipment that is unsafe or difficult-to-monitor. (40 CFR 63.1022(c) as referenced by 40 CFR 63.1410)

1) Designation and criteria for unsafe-to-monitor. Valves meeting the provisions of 40 CFR 63.1025(e)(1), pumps meeting the provisions of 40 CFR 63.1026(e)(6), connectors meeting the provisions of 40 CFR 63.1027(e)(1), and agitators meeting the provisions of 40 CFR 63.1028(e)(7) may be designated unsafe-to-monitor if the owner or operator determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements of 40 CFR 63 Subpart UU. Examples of unsafe-to-monitor equipment include, but is not limited to, equipment under extreme pressure or heat. (40 CFR 63.1022(c)(1) as referenced by 40 CFR 63.1410)

2) Designation and criteria for difficult-to-monitor. Valves meeting the provisions of 40 CFR 63.1025(e)(2) may be designated difficult-to-monitor if the provisions of Additional Condition 1.b.vii.2)(a) apply. Agitators meeting the provisions of 40 CFR 63.1028(e)(5) may be designated difficult-to-monitor if the provisions of Additional Condition 1.b.vii.2)(b) apply. (40 CFR 63.1022(c)(2) as referenced by 40 CFR 63.1410)

(a) Valves. (40 CFR 63.1022(c)(2)(i) as referenced by 40 CFR 63.1410)

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters (7 feet) above a support surface or it is not accessible in a safe manner when it is in regulated material service; and (40 CFR 63.1022(c)(2)(i)(A) as referenced by 40 CFR 63.1410)

(2) The process unit or affected facility within which the valve is located is an existing source, or the owner or operator

designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor. (40 CFR 63.1022(c)(2)(i)(B) as referenced by 40 CFR 63.1410)

(b) Agitators. The owner or operator determines that the agitator cannot be monitored without elevating the monitoring personnel more than 2 meters (7 feet) above a support surface or it is not accessible in a safe manner when it is in regulated material service. (40 CFR 63.1022(c)(2)(ii) as referenced by 40 CFR 63.1410)

3) Identification of unsafe or difficult-to-monitor equipment. The owner or operator shall record the identity of equipment designated as unsafe-to-monitor according to the provisions of Additional Condition 1.b.vii.1) and the planned schedule for monitoring this equipment. The owner or operator shall record the identity of equipment designated as difficult-to-monitor according to the provisions of Additional Condition 1.b.vii.2), the planned schedule for monitoring this equipment, and an explanation why the equipment is unsafe or difficult-to-monitor. This record must be kept at the plant and be available for review by an inspector. (40 CFR 63.1022(c)(3) as referenced by 40 CFR 63.1410)

4) Written plan requirements. (40 CFR 63.1022(c)(4) as referenced by 40 CFR 63.1410)

(a) The owner or operator of equipment designated as unsafe-to-monitor according to the provisions of Additional Condition 1.b.vii.1) shall have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR 63.1024 if a leak is detected. (40 CFR 63.1022(c)(4)(i) as referenced by 40 CFR 63.1410)

(b) The owner or operator of equipment designated as difficult-to-monitor according to the provisions of Additional Condition 1.b.vii.2) shall have a written plan that requires monitoring of the equipment at least once per calendar year and repair of the equipment according to the procedures in 40 CFR 63.1024 if a leak is detected. (40 CFR 63.1022(c)(4)(ii) as referenced by 40 CFR 63.1410)

viii. Special equipment designations: Equipment that is unsafe-to-repair. (40 CFR 63.1022(d) as referenced by 40 CFR 63.1410)

1) Designation and criteria. Connectors subject to the provisions of 40 CFR 63.1024(e) may be designated unsafe-to-repair if the owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirements of 40 CFR 63 Subpart UU, and if the connector will be repaired before the end of the next process unit or affected facility shutdown as specified in 40 CFR 63.1024(e)(2). (40 CFR 63.1022(d)(1) as referenced by 40 CFR 63.1410)

2) Identification of equipment. The identity of connectors designated as unsafe-to-repair and an explanation why the connector is unsafe-to-repair shall be recorded. (40 CFR 63.1022(d)(2) as referenced by 40 CFR 63.1410)

ix. Leak repair schedule. The owner or operator shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected, except as provided in Additional Conditions 1.b.xi and 1.b.xii. A first attempt at repair as defined in 40 CFR 63 Subpart UU shall be made no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing. (40 CFR 63.1024(a) as referenced by 40 CFR 63.1410)

x. Leak identification removal. (40 CFR 63.1024(c) as referenced by 40 CFR 63.1410)

1) Valves and connectors in gas/vapor and light liquid service. The leak identification on a valve in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR 63.1025(d)(2), and no leak has been detected during that monitoring. The leak identification on a connector in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR 63.1027(b)(3)(iv) and no leak has been detected during that monitoring. (40 CFR 63.1024(c)(1) as referenced by 40 CFR 63.1410)

2) Other equipment. The identification that has been placed, pursuant to 40 CFR 63.1023(e)(1), on equipment determined to have a leak, except for a valve or for a connector in gas/vapor or light liquid service that is subject to the provisions of 40 CFR 63.1027(b)(3)(iv), may be removed after it is repaired. (40 CFR 63.1024(c)(2) as referenced by 40 CFR 63.1410)

xi. Delay of repair. Delay of repair is allowed for any of the conditions specified in Additional Conditions 1.b.xi.1) through 1.b.xi.5). The owner or operator shall maintain a record of the facts that explain any delay of repairs and, where appropriate, why the repair was technically infeasible without a process unit shutdown. (40 CFR 63.1024(d) as referenced by 40 CFR 63.1410)

1) Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible without a process unit or affected facility shutdown. Repair of this equipment shall occur as soon as practical, but no later than the end of the next process unit or affected facility shutdown, except as provided in Additional Condition 1.b.xi.5). (40 CFR 63.1024(d)(1) as referenced by 40 CFR 63.1410)

2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in regulated material service. (40 CFR 63.1024(d)(2) as referenced by 40 CFR 63.1410)

3) Delay of repair for valves, connectors, and agitators is also allowed if the provisions of Additional Conditions 1.b.xi.3)(a) and 1.b.xi.3)(b) are met. (40 CFR 63.1024(d)(3) as referenced by 40 CFR 63.1410)

(a) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and (40 CFR 63.1024(d)(3)(i) as referenced by 40 CFR 63.1410)

(b) When repair procedures are effected, the purged material is collected and destroyed, collected and routed to a fuel gas system or process, or recovered in a control device complying with either 40 CFR 63.1034 or 40 CFR 63.1021(b). (40 CFR 63.1024(d)(3)(ii) as referenced by 40 CFR 63.1410)

4) Delay of repair for pumps is also allowed if the provisions of Additional Conditions 1.b.xi.4)(a) and 1.b.xi.4)(b) are met. (40 CFR 63.1024(d)(4) as referenced by 40 CFR 63.1410)

(a) Repair requires replacing the existing seal design with a new system that the owner or operator has determined under the provisions of 40 CFR 63.1035(d) will provide better performance or one of the specifications of Additional Conditions 1.b.xi.4)(a)(1) through 1.b.xi.4)(3) are met. (40 CFR 63.1024(d)(4)(i) as referenced by 40 CFR 63.1410)

(1) A dual mechanical seal system that meets the requirements of 40 CFR 63.1026(e)(1) will be installed; (40 CFR 63.1024(d)(4)(i)(A) as referenced by 40 CFR 63.1410)

(2) A pump that meets the requirements of 40 CFR 63.1026(e)(2) will be installed; or (40 CFR 63.1024(d)(4)(i)(B) as referenced by 40 CFR 63.1410)

(3) A system that routes emissions to a process or a fuel gas system or a closed vent system and control device that meets the requirements of 40 CFR 63.1026(e)(3) will be installed; and (40 CFR 63.1024(d)(4)(i)(C) as referenced by 40 CFR 63.1410)

(b) Repair is completed as soon as practical, but not later than 6 months after the leak was detected. (40 CFR 63.1024(d)(4)(ii) as referenced by 40 CFR 63.1410)

5) Delay of repair beyond a process unit or affected facility shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit or affected facility shutdown, and valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit or affected facility shutdown will not be allowed unless the third process unit or affected facility shutdown occurs sooner than 6 months after the first process unit or affected facility shutdown. (40 CFR 63.1024(d)(5) as referenced by 40 CFR 63.1410)

xii. Unsafe-to-repair—connectors. Any connector that is designated, as described in 40 CFR 63.1022(d), as an unsafe-to-repair connector is exempt from the requirements of 40 CFR 63.1027(d), and Additional Condition 1.b.ix.. (40 CFR 63.1024(e) as referenced by 40 CFR 63.1410)

2. **Monitoring**

a. **HAP (Non-LDAR)** (40 CFR 63 Subpart OOO)

See Additional Condition 3.a.

b. **HAP (LDAR)** (40 CFR 63 Subpart OOO)

i. Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A, except as otherwise provided in this section. (40 CFR 63.1023(b)(1) as referenced by 40 CFR 63.1410)

ii. Detection instrument performance criteria. (40 CFR 63.1023(b)(2) as referenced by 40 CFR 63.1410)

1) Except as provided for in Additional Condition 2.b.ii.2), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2, paragraph (a) of Method 21 shall be for the representative composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, air, water or other inerts that are not HAP or VOC, the representative stream response factor shall be determined on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. (40 CFR 63.1023(b)(2)(i) as referenced by 40 CFR 63.1410)

2) If there is no instrument commercially available that will meet the performance criteria specified in Additional Condition 2.b.ii.1), the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in Additional Condition 2.b.ii.1). (40 CFR 63.1023(b)(2)(ii) as referenced by 40 CFR 63.1410)

iii. Detection instrument calibration procedure. The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A. (40 CFR 63.1023(b)(3) as referenced by 40 CFR 63.1410)

iv. Detection instrument calibration gas. Calibration gases shall be zero air (less than 10 parts per million of hydrocarbon in air); and the gases specified in Additional Condition 2.b.iv.1) except as provided in Additional Condition 2.b.iv2). (40 CFR 63.1023(b)(4) as referenced by 40 CFR 63.1410)

1) Mixtures of methane in air at a concentration no more than 2,000 parts per million greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring. (40 CFR 63.1023(b)(4)(i) as referenced by 40 CFR 63.1410)

2) A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in Additional Condition

2.b.iv.1). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. (40 CFR 63.1023(b)(4)(ii) as referenced by 40 CFR 63.1410)

v. Monitoring shall be performed when the equipment is in regulated material service or is in use with any other detectable material. (40 CFR 63.1023(b)(5) as referenced by 40 CFR 63.1410)

vi. Monitoring data obtained prior to the regulated source becoming subject to the referencing subpart that do not meet the criteria specified in Additional Conditions 2.b.i. through 2.b.v. may still be used to qualify initially for less frequent monitoring under the provisions in 40 CFR 63.1025(a)(2), (b)(3) or (b)(4) for valves or 40 CFR 63.1027(b)(3) for connectors provided the departures from the criteria or from the specified monitoring frequency of 40 CFR 63.1025(b)(3) or (b)(4) or 40 CFR 63.1027(b)(3) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every 6 weeks instead of monthly or quarterly), following the performance criteria of section 3.1.2, paragraph (a) of Method 21 of Appendix A of 40 CFR part 60 instead of Additional Condition 2.b.ii., or monitoring using a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in 40 CFR 63 Subpart UU. Failure to use a calibrated instrument isnot considered a minor departure. (40 CFR 63.1023(b)(6) as referenced by 40 CFR 63.1410)

vii. Instrument monitoring using background adjustments. The owner or operator may elect to adjust or not to adjust the instrument readings for background. If an owner or operator elects not to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in Additional Conditions 2.b.i. through 1.b.v. In such cases, all instrument readings shall be compared directly to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with 40 CFR 63.1030(b) (pressure relief devices) or 40 CFR 63.1031(f) (alternative compressor standard). If an owner or operator elects to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in Additional Conditions 2.b.vii.1) through 2.b.vii.3). (40 CFR 63.1023(c) as referenced by 40 CFR 63.1410)

1) The background level shall be determined, using the procedures in Method 21 of 40 CFR part 60, appendix A. (40 CFR 63.1023(c)(2) as referenced by 40 CFR 63.1410)

2) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A. (40 CFR 63.1023(c)(3) as referenced by 40 CFR 63.1410)

3) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with 40 CFR 63.1030(b) (pressure relief devices) or 40 CFR 63.1031(f) (alternative compressor standard). (40 CFR 63.1023(c)(4) as referenced by 40 CFR 63.1410)

viii. Sensory monitoring consists of visual, audible, olfactory, or any other detection method used to determine a potential leak to the atmosphere. (40 CFR 63.1023(d) as referenced by 40 CFR 63.1410)

ix. For valves in light liquid or vapor service,

1) The owner or operator shall monitor valves for leaks at the intervals specified in Additional Conditions 2.b.ix.1)(a) through 2.b.ix.1)(e) and shall keep the record specified in Additional Condition 3.b.iv. (40 CFR 63.1025(b)(3) as referenced by 40 CFR 63.1410)

(a) If at least the greater of 2 valves or 2 percent of the valves in a process unit leak, as calculated according toAdditional Condition 2.b.ix.3), the owner or operator shall monitor each valve once per month. (40 CFR 63.1025(b)(3)(i) as referenced by 40 CFR 63.1410)

(b) At process units with less than the greater of 2 leaking valves or 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in Additional Conditions 2.b.ix.1)(c) through 2.b.ix.1)(e). Monitoring data generated before the regulated source became subject to the referencing subpart and meeting the criteria of either 40 CFR 63.1023(b)(1) through (b)(5), or 40 CFR 63.1023(b)(6), may be used to qualify initially for less frequent monitoring under Additional Conditions 2.b.ix.1)(c) through 2.b.ix.1)(e). (40 CFR 63.1025(b)(3)(ii) as referenced by 40 CFR 63.1410)

(c) At process units with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every two quarters. (40 CFR 63.1025(b)(3)(iii) as referenced by 40 CFR 63.1410)

(d) At process units with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every four quarters. (40 CFR 63.1025(b)(3)(iv) as referenced by 40 CFR 63.1410)

(e) At process units with less than 0.25 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 years. (40 CFR 63.1025(b)(3)(v) as referenced by 40 CFR 63.1410)

2) For a process unit or a group of process units to which 40 CFR 63 Subpart UU applies, an owner or operator may choose to subdivide the valves in the applicable process unit or group of process units and apply the provisions of Additional Condition 2.b.ix.1) to each subgroup. If the owner or operator elects to subdivide the valves in the applicable process unit or group of process units, then the provisions of Additional Condition 2.b.ix.2)(a) through 2.b.ix.2)(e) apply. (40 CFR 63.1025(b)(4) as referenced by 40 CFR 63.1410)

(a) The overall performance of total valves in the applicable process unit or group of process units to be subdivided shall be less than 2 percent leaking valves, as detected according to Additional Conditions 2.b.i. through 2.b.vi. and as calculated according to Additional Conditions 2.b.ix.3)(b) and 2.b.ix.3)(c). (40 CFR 63.1025(b)(4)(i) as referenced by 40 CFR 63.1410)

(b) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of Additional Conditions 2.b.ix.2)(b)(1) through 2.b.ix.2)(b)(3). (40 CFR 63.1025(b)(4)(ii) as referenced by 40 CFR 63.1410)

(1) The owner or operator shall determine which valves are assigned to each subgroup. Valves with less than one year of monitoring data or valves not monitored within the last twelve months must be placed initially into the most frequently monitored subgroup until at least one year of monitoring data have been obtained. (40 CFR 63.1025(b)(4)(ii)(A) as referenced by 40 CFR 63.1410)

(2) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with that less frequently monitored subgroup's associated percent leaking valves calculation for that monitoring event. (40 CFR 63.1025(b)(4)(ii)(B) as referenced by 40 CFR 63.1410)

(3) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently

monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Nonrepairable valves may not be reassigned to a less frequently monitored subgroup. (40 CFR 63.1025(b)(4)(ii)(C) as referenced by 40 CFR 63.1410)

(c) The owner or operator shall determine every 6 months if the overall performance of total valves in the applicable process unit or group of process units is less than 2 percent leaking valves and so indicate the performance in the next Periodic Report. If the overall performance of total valves in the applicable process unit or group of process units is 2 percent leaking valves or greater, the owner or operator shall no longer subgroup and shall revert to the program required in Additional Conditions 2.b.i through 2.b.v. and 2.b.ix.1) for that applicable process unit or group of process units. An owner or operator can again elect to comply with the valve subgrouping procedures of Additional Condition 2.b.ix.2) if future overall performance of total valves in the process unit or group of process units is again less than 2 percent. The overall performance of total valves in the applicable process unit or group of process units shall be calculated as a weighted average of the percent leaking valves of each subgroup according to Equation number 1: (40 CFR 63.1025(b)(4)(iii) as referenced by 40 CFR 63.1410)

$$\%V_{LO} = \frac{\sum_{i=1}^{n} \left(\%V_{Li} \times V_i \right)}{\sum_{i=1}^{n} V_i}$$

where:

$\%V_{LO}$ = Overall performance of total valves in the applicable process unit or group of process units
$\%V_{Li}$ = Percent leaking valves in subgroup i, most recent value calculated according to the procedures in Additional Conditions 2.b.ix.3)(b) and 2.b.ix.3)(c).
V_i = Number of valves in subgroup i.
n = Number of subgroups.

(d) To determine the monitoring frequency for each subgroup, the calculation procedures of Additional Condition

2.b.ix.3)(c) shall be used. (40 CFR 63.1025(b)(4)(vii) as referenced by 40 CFR 63.1410)

(e) Except for the overall performance calculations required by Additional Conditions 2.b.ix.2)(a) and 2.b.ix2)(c), each subgroup shall be treated as if it were a process unit for the purposes of applying the provisions of 40 CFR 63.1025. (40 CFR 63.1025(b)(4)(viii) as referenced by 40 CFR 63.1410)

3) Percent leaking valves calculation. (40 CFR 63.1025(c) as referenced by 40 CFR 63.1410)

(a) The owner or operator shall decide no later than the compliance date of this part or upon revision of an operating permit whether to calculate percent leaking valves on a process unit or group of process units basis. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis and this shall be the basis used for comparison with the subgrouping criteria specified in Additional Condition 2.b.ix.2)(a). (40 CFR 63.1025(c)(1)(i) as referenced by 40 CFR 63.1410)

(b) The percent leaking valves for each monitoring period for each process unit or valve subgroup, as provided in Additional Condition 2.b.ix.2), shall be calculated using the following equation: (40 CFR 63.1025(c)(1)(ii) as referenced by 40 CFR 63.1410)

$$\%V_L = \left(V_L / V_T \right) \times 100$$

where:

$\%V_L$ = Percent leaking valves.
V_L = Number of valves found leaking, excluding nonrepairable valves, as provided in Additional Condition 2.b.ix.3)(d), and including those valves found leaking pursuant to Additional Conditions 2.b.ix.4)(c).
V_T = The sum of the total number of valves monitored.

(c) When determining monitoring frequency for each process unit or valve subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each process unit or valve subgroup subject to annual or biennial (once every 2

years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. (40 CFR 63.1025(c)(2) as referenced by 40 CFR 63.1410)

(d) Nonrepairable valves. (40 CFR 63.1025(c)(3) as referenced by 40 CFR 63.1410)

(1) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with Additional Condition 2.b.ix.3)(d)(2). Otherwise, a number of nonrepairable valves (identified and included in the percent leaking valves calculation in a previous period) up to a maximum of 1 percent of the total number of valves in regulated material service at a process unit or affected facility may be excluded from calculation of percent leaking valves for subsequent monitoring periods. (40 CFR 63.1025(c)(3)(i) as referenced by 40 CFR 63.1410)

(2) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in regulated material service at a process unit or affected facility, the number of nonrepairable valves exceeding 1 percent of the total number of valves in regulated material service shall be included in the calculation of percent leaking valves. (40 CFR 63.1025(c)(3)(ii) as referenced by 40 CFR 63.1410)

4) After a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definition of repaired and first attempt at repair. (40 CFR 63.1025(d)(2) as referenced by 40 CFR 63.1410)

(a) The monitoring shall be conducted as specified in 40 CFR 63.1023(b) and (c), as appropriate, to determine whether the valve has resumed leaking. (40 CFR 63.1025(d)(2)(i) as referenced by 40 CFR 63.1410)

(b) Periodic monitoring required by Additional Condition 2.b.ix.1) and 2.b.ix.2) may be used to satisfy the requirements of this paragraph, if the timing of the monitoring period coincides with the time specified in this paragraph. Alternatively, other monitoring may be performed to satisfy the requirements of this paragraph, regardless of whether the timing of the monitoring period for periodic monitoring

coincides with the time specified in this paragraph. (40 CFR 63.1025(d)(2)(ii) as referenced by 40 CFR 63.1410)

(c) If a leak is detected by monitoring that is conducted pursuant to Additional Condition 2.b.ix.4), the owner or operator shall follow the provisions of Additional Conditions 2.b.ix.4)(c)(1) and 2.b.ix.4)(c)(2), to determine whether that valve must be counted as a leaking valve for purposes of Additional Condition 2.b.ix.3)(a). (40 CFR 63.1025(d)(2)(iii) as referenced by 40 CFR 63.1410)

(1) If the owner or operator elected to use periodic monitoring required by Additional Conditions 2.b.ix.1) and 2.b.ix.2) to satisfy the requirements of Additional Condition 2.b.ix.4), then the valve shall be counted as a leaking valve. (40 CFR 63.1025(d)(2)(iii)(A) as referenced by 40 CFR 63.1410)

(2) If the owner or operator elected to use other monitoring, prior to the periodic monitoring required by Additional Conditions 2.b.ix.1) and 2.b.ix.2) , to satisfy the requirements of Additional Condition 2.b.ix.4), then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking. (40 CFR 63.1025(d)(2)(iii)(B) as referenced by 40 CFR 63.1410)

5) Unsafe-to-monitor valves. Any valve that is designated, as described in 40 CFR 63.1022(c)(1), as an unsafe-to-monitor valve is exempt from the requirements of Additional Conditions 2.b.ix.1), 2.b.ix.2), and 2.b.ix.4) and the owner or operator shall monitor the valve according to the written plan specified in 40 CFR 63.1022(c)(4). (40 CFR 63.1025(e)(1) as referenced by 40 CFR 63.1410)

6) Difficult-to-monitor valves. Any valve that is designated, as described in 40 CFR 63.1022(c)(2), as a difficult-to-monitor valve is exempt from the requirements of Additional Conditions 2.b.ix.1) and 2.b.ix.2) and the owner or operator shall monitor the valve according to the written plan specified in 40 CFR 63.1022(c)(4). (40 CFR 63.1025(e)(2) as referenced by 40 CFR 63.1410)

x. For pumps in light liquid service,

1) The pumps shall be monitored monthly to detect leaks by the method specified in 40 CFR 63.1023(b) and, as applicable, 40 CFR 63.1023(c). (40 CFR 63.1026(b)(1) as referenced by 40 CFR 63.1410)

2) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The owner or operator shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either Additional Condition 2.b.x.2)(a) or 2.b.x.2)(b). (40 CFR 63.1026(b)(4) as referenced by 40 CFR 63.1410)

(a) The owner or operator shall monitor the pump as specified in 40 CFR 63.1023(b) and, as applicable, 40 CFR 63.1023(c). If the instrument reading indicates a leak as specified in Additional Condition 1.b.ii., a leak is detected and it shall be repaired using the procedures in 40 CFR 63.1024, except as specified in 40 CFR 63.1026(b)(3); or (40 CFR 63.1026(b)(4)(i) as referenced by 40 CFR 63.1410)

(b) The owner or operator shall eliminate the visual indications of liquids dripping. (40 CFR 63.1026(b)(4)(ii) as referenced by 40 CFR 63.1410)

3) Percent leaking pumps calculation. (40 CFR 63.1026(c) as referenced by 40 CFR 63.1410)

(a) The owner or operator shall decide no later than the compliance date of this part or upon revision of an operating permit whether to calculate percent leaking pumps on a process unit basis or group of process units basis. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis. (40 CFR 63.1026(c)(1) as referenced by 40 CFR 63.1410)

(b) If, when calculated on a 6-month rolling average, at least the greater of ei ther 10 percent of the pumps in a process unit or three pumps in a process unit leak, the owner or operator shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.1035. (40 CFR 63.1026(c)(2) as referenced by 40 CFR 63.1410)

(c) The number of pumps at a process unit or affected facility shall be the sum of all the pumps in regulated material service, except that pumps found leaking in a continuous process unit or affected facility within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. (40 CFR 63.1026(c)(3) as referenced by 40 CFR 63.1410)

(d) Percent leaking pumps shall be determined by the following equation: (40 CFR 63.1026(c)(4) as referenced by 40 CFR 63.1410)

$$\%P_L = \left(\left(P_L - P_S \right) \Big/ \left(P_T - P_S \right) \right) \times 100$$

Where:

$\%P_L$ = Percent leaking pumps
P_L = Number of pumps found leaking as determined through monthly monitoring as required in Additional Condition 2.b.x.1). Do not include results from inspection of unsafe-to-monitor pumps pursuant to 40 CFR 63.1026(e)(6).
P_S = Number of pumps leaking within 1 month of start-up during the current monitoring period.
P_T = Total pumps in regulated material service, including those meeting the criteria in Additional Conditions 2.b.x.5)(b), 2.b.x.5)(c), and 2.b.x.5)(e).

4) If a leak is detected pursuant to Additional Conditions 2.b.x.1) and 2.b.x.2), then the leak shall be repaired using the procedures in 40 CFR 63.1024, as applicable, unless otherwise specified in 40 CFR 63.1026(b)(5) for leaks identified by visual indications of liquids dripping. (40 CFR 63.1026(d) as referenced by 40 CFR 63.1410)

5) Special provisions for pumps. (40 CFR 63.1026(e) as referenced by 40 CFR 63.1410)

(a) Dual mechanical seal pumps. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.1026(b), provided the requirements specified in 40 CFR 63(e)(1)(i) through (e)(1)(viii) are met. (40 CFR 63.1026(e)(1) as referenced by 40 CFR 63.1410)

(1) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both. The owner or operator shall keep records at the plant of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes. This record must be available for review by an inspector. (40 CFR 63.1026(e)(1)(i) as referenced by 40 CFR 63.1410)

(2) Each dual mechanical seal system shall meet the requirements specified in 40 CFR 63.1026(e)(1)(ii)(A), (e)(1)(ii)(B), or (e)(1)(ii)(C). (40 CFR 63.1026(e)(1)(ii) as referenced by 40 CFR 63.1410)

(i) Each dual mechanical seal system is operated with the barrier fluid at a pressure that is at all times (except periods of startup, shutdown, or malfunction) greater than the pump stuffing box pressure; or (40 CFR 63.1026(e)(1)(ii)(A) as referenced by 40 CFR 63.1410)

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of either 40 CFR 63.1034 or 40 CFR 63.1021(b); or (40 CFR 63.1026(e)(1)(ii)(B) as referenced by 40 CFR 63.1410)

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream. (40 CFR 63.1026(e)(1)(ii)(C) as referenced by 40 CFR 63.1410)

(3) The barrier fluid is not in light liquid service. (40 CFR 63.1026(e)(1)(iii) as referenced by 40 CFR 63.1410)

(4) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. (40 CFR 63.1026(e)(1)(iv) as referenced by 40 CFR 63.1410)

(5) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The owner or operator shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in 40 CFR 63.1026(e)(1)(v)(A)or (e)(1)(v)(B) prior to the next required inspection. (40 CFR 63.1026(e)(1)(v) as referenced by 40 CFR 63.1410)

(i) The owner or operator shall monitor the pump as specified in 40 CFR 63.1023(b) and, as applicable, 40 CFR 63.1023(c), to determine if there is a leak of regulated material in the barrier fluid. If an instrument

reading of 1,000 parts per million or greater is measured, a leak is detected and it shall be repaired using the procedures in 40 CFR 63.1024; or (40 CFR 63.1026(e)(1)(v)(A) as referenced by 40 CFR 63.1410)

(ii) The owner or operator shall eliminate the visual indications of liquids dripping. (40 CFR 63.1026(e)(1)(v)(B) as referenced by 40 CFR 63.1410)

(6) If indications of liquids dripping from the pump seal exceed the criteria established in 40 CFR 63.1026(e)(1)(i), or if based on the criteria established in 40 CFR 63.1026(e)(1)(i) the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. (40 CFR 63.1026(e)(1)(vi) as referenced by 40 CFR 63.1410)

(7) Each sensor as described in 40 CFR 63.1026(e)(1)(iv) is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site. (40 CFR 63.1026(e)(1)(vii) as referenced by 40 CFR 63.1410)

(8) When a leak is detected pursuant to 40 CFR 63.1026(e)(1)(vi), it shall be repaired as specified in 40 CFR 63.1024. (40 CFR 63.1026(e)(1)(viii) as referenced by 40 CFR 63.1410)

(b) No external shaft. Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of 40 CFR 63.1026(b). (40 CFR 63.1026(e)(2) as referenced by 40 CFR 63.1410)

(c) Routed to a process or fuel gas system or equipped with a closed vent system. Any pump that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pump to a control device meeting the requirements of 40 CFR 63.1034 of this part or 40 CFR 63.1021(b) is exempt from the requirements of 40 CFR 63.1026(b). (40 CFR 63.1026(e)(3) as referenced by 40 CFR 63.1410)

(d) 90 percent exemption. If more than 90 percent of the pumps at a process unit or affected facility meet the criteria in either 40 CFR 63.1026(e)(1) or (e)(2), the process unit or affected facility is exempt from the percent leaking calculation in 40

CFR 63.1026(c). (40 CFR 63.1026(e)(5) as referenced by 40 CFR 63.1410)

(e) Unsafe-to-monitor pumps. Any pump that is designated, as described in 40 CFR 63.1022(c)(1), as an unsafe-to-monitor pump is exempt from the requirements of 40 CFR 63.1026(b), the monitoring and inspection requirements of 40 CFR 63.1026(e)(1)(v) through (viii), and the owner or operator shall monitor and inspect the pump according to the written plan specified in 40 CFR 63.1022(c)(4). (40 CFR 63.1026(e)(6) as referenced by 40 CFR 63.1410)

xi. For connectors in gas/vapor and light liquid service,

1) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in 40 CFR 63.1027(a), as specified in 40 CFR 63.1026(b)(3)(i) through (b)(3)(iii), and shall comply with the requirements of 40 CFR 63.1026(b)(3)(iv)and (b)(3)(v). The required period in which monitoring must be conducted shall be determined from 40 CFR 63.1026(b)(3)(i) through (b)(3)(iii) using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in 40 CFR 63.1026(c). (40 CFR 63.1027(b)(3) as referenced by 40 CFR 63.1410)

(a) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year). (40 CFR 63.1027(b)(3)(i) as referenced by 40 CFR 63.1410)

(b) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4 year monitoring period. (40 CFR 63.1027(b)(3)(ii) as referenced by 40 CFR 63.1410)

(c) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in 40 CFR 63.1027(b)(3)(iii)(A) and either 40 CFR 63.1027(b)(3)(iii)(B) or (b)(3)(iii)(C), as appropriate. (40 CFR 63.1027(b)(3)(iii) as referenced by 40 CFR 63.1410)

(1) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period. (40 CFR 63.1027(b)(3)(iii)(A) as referenced by 40 CFR 63.1410)

(2) If the percent leaking connectors calculated from the monitoring results in 40 CFR 63.1027(b)(3)(iii)(A) is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to 40 CFR 63.1027(b)(3), based on the percent leaking connectors of the total monitored connectors. (40 CFR 63.1027(b)(3)(iii)(B) as referenced by 40 CFR 63.1410)

(3) If the percent leaking connectors calculated from the monitoring results in 40 CFR 63.1027(b)(3)(iii)(A) is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period. (40 CFR 63.1027(b)(3)(iii)(C) as referenced by 40 CFR 63.1410)

(d) If, during the monitoring conducted pursuant to 40 CFR 63.1027(b)(3)(i) through (b)(3)(iii), a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking. (40 CFR 63.1027(b)(3)(iv) as referenced by 40 CFR 63.1410)

(e) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit. (40 CFR 63.1027(b)(3)(v) as referenced by 40 CFR 63.1410)

2) Percent leaking connectors calculation. For use in determining the monitoring frequency, as specified in 40 CFR 63.1027(a) and (b)(3), the percent leaking connectors as used in 40 CFR 63.1027(a) and (b)(3) shall be calculated by using equation number 4. (40 CFR 63.1027(c) as referenced by 40 CFR 63.1410)

$$\%C_L = {}^{C_L}\!/_{C_t} \times 100$$

Where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in 40 CFR 63.1027(a) and (b)(3)(i) through (b)(3)(iii).
C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in 40 CFR 63.1023(b).
C_t = Total number of monitored connectors in the process unit or affected facility.

3) Special provisions for connectors. (40 CFR 63.1027(e) as referenced by 40 CFR 63.1410)

(a) Unsafe-to-monitor connectors. Any connector that is designated, as described in 40 CFR 63.1022(c)(1), as an unsafe-to-monitor connector is exempt from the requirements of 40 CFR 63.1027(a) and (b) and the owner or operator shall monitor according to the written plan specified in 40 CFR 63.1022(c)(4). (40 CFR 63.1027(e)(1) as referenced by 40 CFR 63.1410)

(b) Inaccessible, ceramic, or ceramic-lined connectors. (40 CFR 63.1027(e)(2) as referenced by 40 CFR 63.1410)

(1) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of 40 CFR 63.1027(a) and (b), from the leak repair requirements of 40 CFR 63.1027(d), and from the recordkeeping and reporting requirements of 40 CFR 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in 40 CFR 63.1027(e)(2)(i)(A) through (e)(2)(i)(F), as applicable. (40 CFR 63.1027(e)(2)(i) as referenced by 40 CFR 63.1410)

(i) Buried; (40 CFR 63.1027(e)(2)(i)(A) as referenced by 40 CFR 63.1410)

(ii) Insulated in a manner that prevents access to the connector by a monitor probe; (40 CFR 63.1027(e)(2)(i)(B) as referenced by 40 CFR 63.1410)

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe; (40 CFR 63.1027(e)(2)(i)(C) as referenced by 40 CFR 63.1410)

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to

connectors up to 7.6 meters (25 feet) above the ground. (40 CFR 63.1027(e)(2)(i)(D) as referenced by 40 CFR 63.1410)

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; (40 CFR 63.1027(e)(2)(i)(E) as referenced by 40 CFR 63.1410)

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment. (40 CFR 63.1027(e)(2)(i)(F) as referenced by 40 CFR 63.1410)

(2) If any inaccessible, ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical. (40 CFR 63.1027(e)(2)(ii) as referenced by 40 CFR 63.1410)

xii. For agitators in gas/vapor and light liquid service,

1) Each agitator seal shall be monitored monthly to detect leaks by the methods specified in 40 CFR 63.1023(b) and, as applicable, 40 CFR 63.1023(c), except as provided in 40 CFR 63.1021(b), 40 CFR 63.1036, 40 CFR 63.1037, or 40 CFR 63.1028(e). (40 CFR 63.1028(c)(1) as referenced by 40 CFR 63.1410)

2) Visual inspection. (40 CFR 63.1028(c)(3) as referenced by 40 CFR 63.1410)

(a) Each agitator seal shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. The owner or operator shall document that the inspection was conducted and the date of the inspection. (40 CFR 63.1028(c)(3)(i) as referenced by 40 CFR 63.1410)

(b) If there are indications of liquids dripping from the agitator seal, the owner or operator shall follow the procedures specified in 40 CFR 63.1028(c)(3)(ii)(A)or (c)(3)(ii)(B) prior

to the next required inspection. (40 CFR 63.1028(c)(3)(ii) as referenced by 40 CFR 63.1410)

(1) The owner or operator shall monitor the agitator seal as specified in 40 CFR 63.1023(b) and, as applicable, 40 CFR 63.1023(c), to determine if there is a leak of regulated material. If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected, and it shall be repaired according to 40 CFR 63.1028(d); or (40 CFR 63.1028(c)(3)(ii)(A) as referenced by 40 CFR 63.1410)

(2) The owner or operator shall eliminate the indications of liquids dripping from the agitator seal. (40 CFR 63.1028(c)(3)(ii)(B) as referenced by 40 CFR 63.1410)

3) Special provisions for agitators. (40 CFR 63.1028(e) as referenced by 40 CFR 63.1410)

(a) Dual mechanical seal. Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.1028(c), provided the requirements specified in 40 CFR 63.1028(e)(1)(i) through (e)(1)(vi) are met. (40 CFR 63.1028(e)(1) as referenced by 40 CFR 63.1410)

(1) Each dual mechanical seal system shall meet the applicable requirements specified in 40 CFR 63.1028(e)(1)(i)(A), (e)(1)(i)(B), or (e)(1)(i)(C). (40 CFR 63.1028(e)(1)(i) as referenced by 40 CFR 63.1410)

(i) Operated with the barrier fluid at a pressure that is at all times (except during periods of startup, shutdown, or malfunction) greater than the agitator stuffing box pressure; or (40 CFR 63.1028(e)(1)(i)(A) as referenced by 40 CFR 63.1410)

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that meets the requirements of either 40 CFR 63.1034 or 40 CFR 63.1021(b); or (40 CFR 63.1028(e)(1)(i)(B) as referenced by 40 CFR 63.1410)

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream. (40 CFR

63.1028(e)(1)(i)(C) as referenced by 40 CFR 63.1410)

(2) The barrier fluid is not in light liquid service. (40 CFR 63.1028(e)(1)(ii) as referenced by 40 CFR 63.1410)

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. (40 CFR 63.1028(e)(1)(iii) as referenced by 40 CFR 63.1410)

(4) Each agitator seal is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in 40 CFR 63.1028(e)(1)(iv)(A) or (e)(1)(iv)(B) prior to the next required inspection. (40 CFR 63.1028(e)(1)(iv) as referenced by 40 CFR 63.1410)

(i) The owner or operator shall monitor the agitator seal as specified in 40 CFR 63.1023(b) and, as applicable, 40 CFR 63.1023(c), to determine the presence of regulated material in the barrier fluid. If an instrument reading equivalent to or greater than 10,000 ppm is measured, a leak is detected and it shall be repaired using the procedures in 40 CFR 63.1024, or (40 CFR 63.1028(e)(1)(iv)(A) as referenced by 40 CFR 63.1410)

(ii) The owner or operator shall eliminate the visual indications of liquids dripping. (40 CFR 63.1028(e)(1)(iv)(B) as referenced by 40 CFR 63.1410)

(5) Each sensor as described in 40 CFR 63.1028(e)(1)(iii) is observed daily or is equipped with an alarm unless the agitator seal is located within the boundary of an unmanned plant site. (40 CFR 63.1028(e)(1)(v) as referenced by 40 CFR 63.1410)

(6) The owner or operator of each dual mechanical seal system shall meet the requirements specified in 40 CFR 63.1028(e)(1)(vi)(A) and (e)(1)(vi)(B). (40 CFR 63.1028(e)(1)(vi) as referenced by 40 CFR 63.1410)

(i) The owner or operator shall determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both and applicable to the presence and frequency of drips. If indications of liquids dripping from the agitator seal exceed the criteria, or if, based on the criteria the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024, as applicable. (40 CFR 63.1028(e)(1)(vi)(A) as referenced by 40 CFR 63.1410)

(ii) The owner or operator shall keep records of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes. (40 CFR 63.1028(e)(1)(vi)(B) as referenced by 40 CFR 63.1410)

(b) No external shaft. Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from 40 CFR 63.1028(c). (40 CFR 63.1028(e)(2) as referenced by 40 CFR 63.1410)

(c) Routed to a process or fuel gas system or equipped with a closed vent system. Any agitator that is routed to a process or fuel gas system that captures and transports leakage from the agitator to a control device meeting the requirements of either 40 CFR 63.1034 or 40 CFR 63.1021(b) is exempt from the requirements of 40 CFR 63.1028(c). (40 CFR 63.1028(e)(3) as referenced by 40 CFR 63.1410)

(d) Difficult-to-monitor agitator seals. Any agitator seal that is designated, as described in 40 CFR 63.1022(c)(2), as a difficult-to-monitor agitator seal is exempt from the requirements of 40 CFR 63.1028(c) and the owner or operator shall monitor the agitator seal according to the written plan specified in 40 CFR 63.1022(c)(4). (40 CFR 63.1028(e)(5) as referenced by 40 CFR 63.1410)

(e) Equipment obstructions. Any agitator seal that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of 40 CFR 63.1028(c). (40 CFR 63.1028(e)(6) as referenced by 40 CFR 63.1410)

(f) Unsafe-to-monitor agitator seals. Any agitator seal that is designated, as described in 40 CFR 63.1022(c)(1), as an unsafe-to-monitor agitator seal is exempt from the requirements of 40 CFR 63.1028(c) and the owner or operator of the agitator seal monitors the agitator seal according to the written plan specified in 40 CFR 63.1022(c)(4). (40 CFR 63.1028(e)(7) as referenced by 40 CFR 63.1410)

3. **Recordkeeping**

a. **HAP (Non-LDAR)** (40 CFR 63 Subpart OOO)

i. Unless otherwise specified in this subpart, each owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, as specified in 40 CFR 63.1416(a)(1), with the exception listed in 40 CFR 63.1416(a)(2). (40 CFR 63.1416(a))

1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, CD-ROM, optical disc, magnetic tape, or microfiche. (40 CFR 63.1416(a)(1))

2) If an owner or operator submits copies of reports to the appropriate EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of 40 CFR 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of those reports. (40 CFR 63.1416(a)(2))

ii. Start-up, shutdown, and malfunction plan and records. The owner or operator of an affected source shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) and shall keep the plan on-site. Records shall be kept as specified in 40 CFR 63.1416(b)(1)and (2). Records are not required for emission points that do not require control under this subpart. (40 CFR 63.1416(b))

1) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with this subpart during which

excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. (40 CFR 63.1416(b)(1))

2) For each start-up, shutdown, or malfunction during which excess emissions (as defined in §63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing a control device to a backup control device (e.g., a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records shall be kept of whether the plan was followed. These records may take the form of a "checklist" or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event. (40 CFR 63.1416(b)(2))

iii. If a batch process vent is seeking to demonstrate compliance with the mass emission limits specified in 40 CFR 63.1406(a)(1)(iii) or (a)(2)(iii) or specified in 40 CFR 63.1407(b)(2), the following information: (40 CFR 63.1416(d)(1)(v))

1) Results of the initial compliance demonstration specified in 40 CFR 63.1413(e)(2). (40 CFR 63.1416(d)(1)(v)(A))

2) The organic HAP emissions from the batch process vent associated with each single type of batch cycle (Ecycle i) determined as specified in 40 CFR 63.1413(e)(2). (40 CFR 63.1416(d)(1)(v)(B)

iv. Each owner or operator of a batch process vent seeking to demonstrate compliance with the mass emission limits, specified in 40 CFR 63.1406(a)(1)(iii) or (a)(2)(iii), shall keep the following records, as applicable, readily accessible. (40 CFR 63.1416(d)(3)(iv))

1) The cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate. (40 CFR 63.1416(d)(3)(iv)(A))

2) If there is a deviation from the mass emission limit, as specified in 40 CFR 63.1413(h), the individual monthly emission rate data points making up the cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate. (40 CFR 63.1416(d)(3)(iv)(B))

3) If it becomes necessary to redetermine (Ecycle i) for a reactor batch process vent, as specified in 40 CFR 63.1413(e)(2), the new value(s) for (Ecycle i). (40 CFR 63.1416(d)(3)(iv)(C))

b. **HAP (LDAR)** (40 CFR 63 Subpart OOO)

i. When each leak is detected pursuant to the monitoring specified in 40 CFR 63.1023(a), a weatherproof and readily visible identification, shall be attached to the leaking equipment. (40 CFR 63.1023(e)(1) as referenced by 40 CFR 63.1410)

ii. When each leak is detected, the information specified in 40 CFR 63.1024(f) shall be recorded and kept pursuant to the referencing subpart, except for the information for connectors complying with the 8 year monitoring period allowed under 40 CFR 63.1027(b)(3)(iii) shall be kept 5 years beyond the date of its last use. (40 CFR 63.1023(e)(2) as referenced by 40 CFR 63.1410)

iii. Leak repair records. For each leak detected, the information specified in 40 CFR 63.1024(f)(1) through (f)(5) shall be recorded and maintained pursuant to the referencing subpart. (40 CFR 63.1024(f) as referenced by 40 CFR 63.1410)

1) The date of first attempt to repair the leak. (40 CFR 63.1024(f) as referenced by 40 CFR 63.1410)

2) The date of successful repair of the leak. (40 CFR 63.1024(f)(2) as referenced by 40 CFR 63.1410)

3) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A at the time the leak is successfully repaired or determined to be nonrepairable. (40 CFR 63.1024(f)(3) as referenced by 40 CFR 63.1410)

4) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak as specified in 40 CFR 63.1024(f)(4)(i) and (f)(4)(ii). (40 CFR 63.1024(f)(4) as referenced by 40 CFR 63.1410)

(a) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure. (40 CFR 63.1024(f)(4)(i) as referenced by 40 CFR 63.1410)

(b) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason

for depletion. (40 CFR 63.1024(f)(4)(ii) as referenced by 40 CFR 63.1410)

5) Dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired. (40 CFR 63.1024(f)(5) as referenced by 40 CFR 63.1410)

iv. For valves in light liquid or vapor service, the owner or operator shall keep a record of the monitoring schedule for each process unit. (40 CFR 63.1025(b)(3)(vi) as referenced by 40 CFR 63.1410)

v. The owner or operator shall maintain records specified in 40 CFR 63.1025(b)(4)(iv)(A) through (b)(4)(iv)(D). (40 CFR 63.1025(b)(4)(iv) as referenced by 40 CFR 63.1410)

1) Which valves are assigned to each subgroup, (40 CFR 63.1025(b)(4)(iv)(A) as referenced by 40 CFR 63.1410)

2) Monitoring results and calculations made for each subgroup for each monitoring period, (40 CFR 63.1025(b)(4)(iv)(B) as referenced by 40 CFR 63.1410)

3) Which valves are reassigned, the last monitoring result prior to reassignment, and when they were reassigned, and (40 CFR 63.1025(b)(4)(iv)(C) as referenced by 40 CFR 63.1410)

4) The results of the semiannual overall performance calculation required in 40 CFR 63.1025(b)(4)(iii). (40 CFR 63.1025(b)(4)(iv)(D) as referenced by 40 CFR 63.1410)

vi. General equipment leak records. (40 CFR 63.1038(b) as referenced by 40 CFR 63.1410)

1) As specified in 40 CFR 63.1022(a) and (b), the owner or operator shall keep general and specific equipment identification if the equipment is not physically tagged and the owner or operator is electing to identify the equipment subject to 40 CFR 63 Subpart UU through written documentation such as a log or other designation. (40 CFR 63.1038(b)(1) as referenced by 40 CFR 63.1410)

2) The owner or operator shall keep a written plan as specified in 40 CFR 63.1022(c)(4) for any equipment that is designated as unsafe- or difficult-to-monitor. (40 CFR 63.1038(b)(2) as referenced by 40 CFR 63.1410)

3) The owner or operator shall maintain a record of the identity and an explanation as specified in 40 CFR 63.1022(d)(2) for any equipment

that is designated as unsafe-to-repair. (40 CFR 63.1038(b)(3) as referenced by 40 CFR 63.1410)

4) As specified in 40 CFR 63.1022(e), the owner or operator shall maintain the identity of compressors operating with an instrument reading of less than 500 parts per million. (40 CFR 63.1038(b)(4) as referenced by 40 CFR 63.1410)

5) The owner or operator shall keep records associated with the determination that equipment is in heavy liquid service as specified in 40 CFR 63.1022(f). (40 CFR 63.1038(b)(5) as referenced by 40 CFR 63.1410)

6) The owner or operator shall keep records for leaking equipment as specified in 40 CFR 63.1023(e)(2). (40 CFR 63.1038(b)(6) as referenced by 40 CFR 63.1410)

7) The owner or operator shall keep records for leak repair as specified in 40 CFR 63.1024(f) and records for delay of repair as specified in 40 CFR 63.1024(d). (40 CFR 63.1038(b)(7) as referenced by 40 CFR 63.1410)

vii. Specific equipment leak records. (40 CFR 63.1038(c) as referenced by 40 CFR 63.1410)

1) For valves, the owner or operator shall maintain the records specified in 40 CFR 63.1038(c)(1)(i) and (c)(1)(ii). (40 CFR 63.1038(c)(1) as referenced by 40 CFR 63.1410)

(a) The monitoring schedule for each process unit as specified in 40 CFR 63.1025(b)(3)(vi). (40 CFR 63.1038(c)(1)(i) as referenced by 40 CFR 63.1410)

(b) The valve subgrouping records specified in 40 CFR 63.1025(b)(4)(iv), if applicable. (40 CFR 63.1038(c)(1)(ii) as referenced by 40 CFR 63.1410)

2) For pumps, the owner or operator shall maintain the records specified in 40 CFR 63.1038(c)(2)(i) through (c)(2)(iii). (40 CFR 63.1038(c)(2) as referenced by 40 CFR 63.1410)

(a) Documentation of pump visual inspections as specified in 40 CFR 63.1026(b)(4). (40 CFR 63.1038(c)(2)(i) as referenced by 40 CFR 63.1410)

(b) Documentation of dual mechanical seal pump visual inspections as specified in 40 CFR 63.1026(e)(1)(v). (40 CFR 63.1038(c)(2)(ii) as referenced by 40 CFR 63.1410)

(c) For the criteria as to the presence and frequency of drips for dual mechanical seal pumps, records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR 63.1026(e)(1)(i). (40 CFR 63.1038(c)(2)(iii) as referenced by 40 CFR 63.1410)

3) For connectors, the owner or operator shall maintain the monitoring schedule for each process unit as specified in 40 CFR 63.1027(b)(3)(v). (40 CFR 63.1038(c)(3) as referenced by 40 CFR 63.1410)

4) For agitators, the owner or operator shall maintain the following records: (40 CFR 63.1038(c)(4) as referenced by 40 CFR 63.1410)

(a) Documentation of agitator seal visual inspections as specified in 40 CFR 63.1028; and (40 CFR 63.1038(c)(4)(i) as referenced by 40 CFR 63.1410)

(b) For the criteria as to the presence and frequency of drips for agitators, the owner or operator shall keep records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR 63.1028(e)(1)(vi). (40 CFR 63.1038(c)(4)(ii) as referenced by 40 CFR 63.1410)

5) For pressure relief devices in gas and vapor or light liquid service, the owner or operator shall keep records of the dates and results of monitoring following a pressure release, as specified in 40 CFR 63.1030(c)(3). (40 CFR 63.1038(c)(5) as referenced by 40 CFR 63.1410)

6) For compressors, the owner or operator shall maintain the records specified in 40 CFR 63.1038(c)(6)(i) and (c)(6)(ii). (40 CFR 63.1038(c)(6) as referenced by 40 CFR 63.1410)

(a) For criteria as to failure of the seal system and/or the barrier fluid system, record the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR 63.1031(d)(2). (40 CFR 63.1038(c)(6)(i) as referenced by 40 CFR 63.1410)

(b) For compressors operating under the alternative compressor standard, record the dates and results of each compliance test

as specified in 40 CFR 63.1031(f)(2). (40 CFR 63.1038(c)(6)(ii) as referenced by 40 CFR 63.1410)

7) For a pump QIP program, the owner or operator shall maintain the records specified in 40 CFR 63.1038(c)(7)(i) through (c)(7)(v). (40 CFR 63.1038(c)(7) as referenced by 40 CFR 63.1410)

(a) Individual pump records as specified in 40 CFR 63.1035(d)(2). (40 CFR 63.1038(c)(7)(i) as referenced by 40 CFR 63.1410)

(b) Trial evaluation program documentation as specified in 40 CFR 63.1035(d)(6)(iii). (40 CFR 63.1038(c)(7)(ii) as referenced by 40 CFR 63.1410)

(c) Engineering evaluation documenting the basis for judgement that superior emission performance technology is not applicable as specified in 40 CFR 63.1035(d)(6)(vi). (40 CFR 63.1038(c)(7)(iii) as referenced by 40 CFR 63.1410)

(d) Quality assurance program documentation as specified in 40 CFR 63.1035(d)(7). (40 CFR 63.1038(c)(7)(iv) as referenced by 40 CFR 63.1410)

(e) QIP records as specified in 40 CFR 63.1035(e). (40 CFR 63.1038(c)(7)(v) as referenced by 40 CFR 63.1410)

4. **Reporting**

a. **HAP (Non-LDAR)** (40 CFR 63 Subpart OOO)

i. Except as specified in 40 CFR 63.1417(f)(12), a report containing the information in 40 CFR 63.1417(f)(2) or containing the information in 40 CFR 63.1417(f)(3) through (11), as appropriate, shall be submitted semiannually no later than 60 days after the end of each 180 day period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Subsequent reports shall cover each preceding 6-month period. (40 CFR 63.1417(f)(1))

ii. If none of the compliance exceptions specified in 40 CFR 63.1417(f)(3) through (11) occurred during the 6-month period, the Periodic Report required by 40 CFR 63.1417(f)(1) shall be a statement that the affected source was in compliance for the preceding 6-month period and no activities specified in 40 CFR 63.1417(f)(3) through (11) occurred during the preceding 6-month period. (40 CFR 63.1417(f)(2))

iii. Notification if one or more emission point(s) or one or more APPU is added to an affected source. The owner or operator shall submit the following information: (40 CFR 63.1417(f)(4))

1) A description of the addition to the affected source; (40 CFR 63.1417(f)(4)(i))

2) Notification of applicability status (i.e., does the emission point require control) of the additional emission point, if appropriate, or notification of all emission points in the added APPU. (40 CFR 63.1417(f)(4)(ii))

iv. If there is a deviation from the mass emission limit specified in 40 CFR 63.1406(a)(1)(iii) or (a)(2)(iii), 40 CFR 63.1407(b)(2), or 40 CFR 63.1408(b)(2), the following information, as appropriate, shall be included: (40 CFR 63.1417(f)(5))

1) The cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate. (40 CFR 63.1417(f)(5)(i))

2) The individual monthly emission rate data points making up the cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate. (40 CFR 63.1417(f)(5)(ii))

3) If an owner or operator is demonstrating compliance using the procedures in 40 CFR 63.1413(e)(2)(ii), the monthly value of the site-specific emission limit. (40 CFR 63.1417(f)(5)(iii))

v. The Periodic Report shall include the results for each change made to a primary product determination for amino/phenolic resins made under 40 CFR 63.1400(g). (40 CFR 63.1417(f)(7))

vi. The Periodic Report shall include the results for each change made to a predominant use determination for a storage vessel belonging to an affected source subject to this subpart that is made under 40 CFR 63.1400(h)(6). (40 CFR 63.1417(f)(8))

vii. Start-up, shutdown, and malfunction reports. For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under 40 CFR 63.1417(f) instead of being submitted on the schedule specified in 40 CFR 63.10(d)(5)(i). Said reports shall include the information specified in 40 CFR 63.1416(b)(1) and (2) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. (40 CFR 63.1417(g))

viii. Owners or operators of APPU or emission points (other than equipment leak components subject to 40 CFR 63.1410) that are added to the affected source under the provisions of 40 CFR 63.1400(d)(2) or (3) or under the provisions of 40 CFR 63.5(b)(6) shall submit reports as specified in 40 CFR 63.1417(h)(5)(i) through (ii). (40 CFR 63.1417(h)(5))

1) Reports shall include: (40 CFR 63.1417(h)(5)(i))

(a) A description of the process change or addition, as appropriate; (40 CFR 63.1417(h)(5)(i)(A))

(b) The planned start-up date and the appropriate compliance date; and (40 CFR 63.1417(h)(5)(i)(B))

(c) Identification of the emission points (except equipment leak components subject to 40 CFR 63.1410) specified in 40 CFR 63.1417(h)(5)(i)(C)(1) through (3), as applicable. (40 CFR 63.1417(h)(5)(i)(C))

(1) All the emission points in an added APPU. (40 CFR 63.1417(h)(5)(i)(C)(1))

(2) All the emission points in an affected source that becomes a new affected source. (40 CFR 63.1417(h)(5)(i)(C)(2))

(3) All the added or created emission points resulting from a process change. (40 CFR 63.1417(h)(5)(i)(C)(3))

2) If the owner or operator wishes to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, alternative controls, engineering assessment to estimate organic HAP emissions from a batch emissions episode, or wishes to establish parameter monitoring levels according to the procedures contained in 40 CFR 63.1413(a)(1)(ii) or (ii), a Precompliance Report shall be submitted no later than 180 days prior to the appropriate compliance date. (40 CFR 63.1417(h)(5)(ii))

b. **HAP (LDAR)** (40 CFR 63 Subpart OOO)

i. The owner or operator shall notify the Administrator no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating process units and the number of valves assigned to each subgroup, if applicable, and may be included in the next Periodic Report. (40 CFR 63.1025(b)(4)(v) as referenced by 40 CFR 63.1410)

ii. If applicable, the owner or operator shall submit in the periodic reports the information specified in 40 CFR 63.1025(b)(4)(vi)(A) and (b)(4)(vi)(B). (40 CFR 63.1025(b)(4)(vi) as referenced by 40 CFR 63.1410)

1) Total number of valves in each subgroup, and (40 CFR 63.1025(b)(4)(vi)(A) as referenced by 40 CFR 63.1410)

2) Results of the semiannual overall performance calculation required by 40 CFR 63.1025(b)(4)(iii). (40 CFR 63.1025(b)(4)(vi)(B) as referenced by 40 CFR 63.1410)

iii. For the equipment specified in 40 CFR 63.1039(b)(1)(i) through (b)(1)(v), report in a summary format by equipment type, the number of components for which leaks were detected and for valves, pumps and connectors show the percent leakers, and the total number of components monitored. Also include the number of leaking components that were not repaired as required by 40 CFR 63.1024, and for valves and connectors, identify the number of components that are determined by 40 CFR 63.1025(c)(3) to be nonrepairable. (40 CFR 63.1039(b)(1) as referenced by 40 CFR 63.1410)

1) Valves in gas and vapor service and in light liquid service pursuant to 40 CFR 63.1025(b) and (c). (40 CFR 63.1039(b)(1)(i) as referenced by 40 CFR 63.1410)

2) Pumps in light liquid service pursuant to 40 CFR 63.1026(b) and (c). (40 CFR 63.1039(b)(1)(ii) as referenced by 40 CFR 63.1410)

3) Connectors in gas and vapor service and in light liquid service pursuant to 40 CFR 63.1027(b) and (c). (40 CFR 63.1039(b)(1)(iii) as referenced by 40 CFR 63.1410)

4) Agitators in gas and vapor service and in light liquid service pursuant to 40 CFR 63.1028(c). (40 CFR 63.1039(b)(1)(iv) as referenced by 40 CFR 63.1410)

iv. Where any delay of repair is utilized pursuant to 40 CFR 63.1024(d), report that delay of repair has occurred and report the number of instances of delay of repair. (40 CFR 63.1039(b)(2) as referenced by 40 CFR 63.1410)

v. Report, if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i). (40 CFR 63.1039(b)(5) as referenced by 40 CFR 63.1410)

vi. Report, if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035. (40 CFR 63.1039(b)(6) as referenced by 40 CFR 63.1410)

Comments

1. The emission points E12-E14, E210, E31-E32, and E51 are not subject to the non-reactor batch process vent standards in 40 CFR 63.1407 due to emitting less than 0.25 tons per year of uncontrolled organic HAP emissions according to 40 CFR 63.1407(a)(1).

2. The Notification of Compliance Status was submitted on June 20, 2003 in accordance with 40 CFR 63.1417(e).

3. The following is a summary of the report periods and due dates for the reports required by this emission unit:

Report Description	Report Period	Report due dates
1st Semiannual for Title V	January 1 through June 30	August 29
2nd Semiannual for Title V	July 1 through December 31	March 1[1]
1st Semiannual for non-LDAR	February 15 through August 15	October 14
2nd Semiannual for non-LDAR	August 16 through February 14	April 15[2]
1st Semiannual for LDAR	February 15 through August 15	October 14
2nd Semiannual for LDAR	August 16 through February 14	April 15[2]

Notes:
[1] The date for leap years is February 29
[2] The date for leap year is April 14